



west virginia department of environmental protection

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APR 10 2019

ENVIRONMENTAL ENFORCEMENT

Charleston

TO: MarkWest Liberty Midstream & Resources, L.L.C. DATE: March 28, 2019
Gregory Bezdek, SVP, NE Region
4600 J Barry Ct. Ste 500 ORDER NO.: 8945
Canonsburg, PA 15317

INTRODUCTION

This Consent Order is issued by the Director of the Division of Water and Waste Management (hereinafter "Director"), under the authority of West Virginia Code, Chapter 22, Article 11, Section 1 et seq. to MarkWest Liberty Midstream & Resources, L.L.C. (hereinafter "MarkWest").

FINDINGS OF FACT

In support of this Order, the Director hereby finds the following:

1. MarkWest, through its contractors, is conducting land disturbance activity associated with installation of pipeline in Doddridge and Wetzel Counties, West Virginia. MarkWest was issued Water Pollution Control Permit No. WV0116815, Registration No. WVR311004, for Stormwater Associated With Oil and Gas Related Construction Activities on April 25, 2018.
2. On August 22, 2018 and August 23, 2018, West Virginia Department of Environmental Protection (WVDEP) personnel conducted an inspection of the facility. During the inspection, violations of the following sections of WV Legislative Rules and the permit were observed and documented:
 - a. Section B – MarkWest failed to comply with the approved Storm Water Pollution Prevention Plan (SWPPP). Several erosion control devices were not in place as detailed by the SWPPP. Water bars were not installed as indicated in the SWPPP in

Promoting a healthy environment.

several areas. Water bar outlet protection was not in place as indicated in the approved SWPPP in several areas.

- b. Section G.4.e.2 - MarkWest failed to properly implement controls. Specifically, there were improperly installed water bars and perimeter controls in several areas. There were several areas where a diversion berm was installed in addition to the perimeter controls indicated in the SWPPP and, in many cases, the installed diversion berm lacked adequate outlets. Several timber mat bridges were not installed as indicated in the approved SWPPP. The timber mat bridges at crossing numbers 41 (UNT Riggins Run) and 43 (Riggins Run) were not properly tied into the installed perimeter controls. The approved SWPPP indicates the need for stabilized access roads; however, unstable access roads were noted in the Phoenix Construction work areas.
- c. Section G.4.c - MarkWest failed to modify its SWPPP when the SWPPP proved to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges. There were several areas where sediment laden water could leave the site, but the SWPPP did not indicate the need for a Best Management Practice (BMP). There were also areas where the installed BMPs proved to be inadequate, and MarkWest had not modified the SWPPP.
- d. Section G.4.e.2.A.ii.f - MarkWest failed to protect fill slopes. Concentrated flow was being directed over fill slopes due to improperly constructed water bars, as well as water bars that were in need of maintenance.
- e. Section G.4.e.2.A.ii.j - MarkWest failed to prevent sediment-laden water from leaving the site without going through an appropriate device. Offsite sediment deposits occurred in several areas. The sediment laden water left the site due to improperly installed BMPs, failure to modify the SWPPP, inadequate dewatering BMPs, and BMPs that were not in place.
- f. Section D.1 - MarkWest failed to operate and maintain all erosion control devices. Improperly maintained BMPs were noted throughout the inspected area.
- g. 47CSR2 Section 3.2.a – MarkWest caused conditions not allowable in waters of the State by creating distinctly visible settleable solids in the following four (4) locations: the unnamed tributary (UNT) of Beverlin Fork (UNT 129) ($39^{\circ} 26.346' X 80^{\circ} 36.157'$), the UNT of Franks Run ($39^{\circ} 26.230' X 80^{\circ} 36.769'$), and the UNT of Franks Run ($39^{\circ} 26.167' X 80^{\circ} 36.861'$).
- h. 47CSR2 Section 3.2.b – MarkWest caused conditions not allowable in waters of the State by creating sediment deposits in the following ten (10) locations: the UNT of Morgans Run (UNT 160) ($39^{\circ} 18.488' X 80^{\circ} 40.335'$), the UNT of Flint Run (UNT 94 near 272+00) ($39^{\circ} 20.051' X 80^{\circ} 39.945'$), the UNT of Beverlin Fork (UNT 129) ($39^{\circ} 26.346' X 80^{\circ} 36.157'$), the UNT of Franks Run (Adjacent to 798+60) ($39^{\circ} 26.011' X 80^{\circ} 36.969'$), the UNT of Morgans Run ($39^{\circ} 17.638' X 80^{\circ} 40.727'$), the UNT of Righthand Fork of Morgans Run (UNT 108) ($39^{\circ} 17.955' X 80^{\circ} 40.580'$), the UNT of Franks Run ($39^{\circ} 26.230' X 80^{\circ} 36.769'$), the UNT of Franks Run ($39^{\circ} 26.167' X 80^{\circ} 36.861'$), the UNT of Beverlin Fork ($39^{\circ} 26.280' X 80^{\circ} 36.183'$), and the UNT of Franks Run ($39^{\circ} 25.885' X 80^{\circ} 37.133'$).

As a result of the aforementioned violations, Notice of Violation (NOV) No. W18-09-085-TJC was issued to MarkWest.

3. On September 7, 2018, WVDEP issued Order No. 8879 to MarkWest in response to the aforementioned violations. The Order required MarkWest to submit an approvable plan

of corrective action and schedule, outlining action items and completion dates for how and when MarkWest would achieve compliance with all terms and conditions of its permit and pertinent laws and rules. On October 19, 2018, MarkWest's plan of corrective action was approved and incorporated into the terms and conditions of Order No. 8879.

4. On September 21, 2018, WVDEP personnel conducted an inspection of the facility. During the inspection, violations of the following sections of the terms and conditions of the WV/NPDES permit were observed and documented:
 - a. Section D.1. - MarkWest failed to properly operate and maintain all systems of treatment and control.- Specifically, MarkWest failed to maintain perimeter controls near the Route 20 bore site and Arches Fork Road.
 - b. Section G.4.e.2.A.ii.j - MarkWest failed to prevent sediment-laden water from leaving the site without going through an appropriate device near Arches Fork access road.
- As a result of the aforementioned violations, NOV No. W18-52-032-RDD was issued to MarkWest.
5. On October 10, 2018 and October 11, 2018, WVDEP personnel conducted an inspection of the facility. During the inspection, violations of the following sections of Legislative Rule and the permit were observed and documented:
 - a. Section D.1 - MarkWest failed to operate and maintain all erosion control devices. Maintenance of installed BMPs was lacking throughout the inspected area on perimeter controls, access road stabilization, water bars, and water bar terminus BMPs.
 - b. Section G.4.c - MarkWest failed to modify its SWPPP when it proved to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges. The installed diversion berm had inadequate outlets, and the plan had not been modified in many areas since the previous inspection. The SWPPP did not indicate the need for a BMP in the areas adjacent to 142+00, 415+00, and 435+00 to prevent sediment laden water from leaving the site.
 - c. Section G.4.e.2 - MarkWest failed to properly implement controls. Specifically, improperly installed water bars, water bar terminus BMPs, perimeter controls, timber mat bridges, and timber mat bridge tie-ins were noted in several areas.
 - d. Section B - MarkWest failed to comply with the approved SWPPP. Water bar terminus BMPs were not installed as indicated in the SWPPP adjacent to 510+00 and from 561+00 to 588+00. Perimeter controls that were indicated in the approved SWPPP were not installed as indicated from 561+00 to 588+00. Access road 42 was not stabilized with gravel as indicated in the SWPPP.
 - e. Section G.4.e.2.A.ii.f - MarkWest failed to protect fill slopes. Concentrated flow was being directed over unprotected fill slopes in several areas.
 - f. Section G.4.e.2.A.i - MarkWest failed to provide interim stabilization on areas where construction activities have temporarily ceased for more than twenty-one (21) days. Areas adjacent to 287+00 (Stockpile), 350+80 (Stockpile), and 862+00 (entire Right Of Way) were idle since the previous inspection and lacked temporary stabilization.

A representative of MarkWest stated that the area had been idle for more than one (1) month.

- g. Section G.4.e.2.A.ii.j - MarkWest failed to prevent sediment-laden water from leaving the site without going through an appropriate device. Offsite sediment deposits in several areas occurred due to improper operation and maintenance, improperly installed BMPs, failure to install BMPs indicated in the approved SWPPP, failure to modify the SWPPP when it proved to be inadequate and/or ineffective, and failure to protect fill slopes from erosion.
- h. 47CSR2 Section 3.2.a.- MarkWest caused conditions not allowable in waters of the State by creating distinctly visible settleable solids in the following seven (7) locations: the UNT of Franks Run ($39^{\circ}25.922'$ X $80^{\circ}37.079'$), the UNT of Beverlin Fork (UNT 21) ($39^{\circ}26.296'$ X $80^{\circ}36.165'$), the UNT of Franks Run (UNT127) ($39^{\circ}26.234'$ X $80^{\circ}36.756'$), the UNT of Beverlin Fork ($39^{\circ}26.320'$ X $80^{\circ}36.101'$), McElroy Creek ($39^{\circ}23.952'$ X $80^{\circ}38.768'$), the UNT of Riggins Run (UNT – 18) ($39^{\circ}22.075'$ X $80^{\circ}39.463'$), and the UNT of Riggins Run ($39^{\circ}21.443'$ X $80^{\circ}39.489'$).
- i. 47CSR2 Section 3.2.b. – MarkWest caused conditions not allowable in waters of the State by creating sediment deposits in the following twelve (12) locations: the UNT of Buckeye Creek (UNT59) ($39^{\circ}16.844'$ X $80^{\circ}41.115'$), the UNT of Morgans Run ($39^{\circ}17.640'$ X $80^{\circ}40.738'$), the UNT of Righthand Fork of Morgans Run (UNT 2) ($39^{\circ}17.932'$ X $80^{\circ}40.600'$), the UNT of Flint Run ($39^{\circ}21.161'$ X $80^{\circ}39.549'$), the UNT of Flint Run ($39^{\circ}21.223'$ X $80^{\circ}39.649'$), the UNT of Franks Run ($39^{\circ}25.922'$ X $80^{\circ}37.079'$), the UNT of Beverlin Fork (UNT 21) ($39^{\circ}26.296'$ X $80^{\circ}36.165'$), the UNT of Morgans Run ($39^{\circ}17.506'$ X $80^{\circ}40.813'$), the UNT of Flint Run ($39^{\circ}20.058'$ X $80^{\circ}39.931'$), the UNT of Morgans Run ($39^{\circ}18.509'$ X $80^{\circ}40.356'$), the UNT of Riggins Run (UNT – 18) ($39^{\circ}22.075'$ X $80^{\circ}39.463'$), and the UNT of Riggins Run ($39^{\circ}21.443'$ X $80^{\circ}39.489'$).

As a result of the aforementioned violations, NOV No. W18-09-098-TJC was issued to MarkWest.

- 6. On November 2, 2018, WVDEP issued Order No. 8904 to MarkWest in response to the aforementioned violations. The Order required MarkWest to submit an approvable plan of corrective action and schedule, outlining action items and completion dates for how and when MarkWest would achieve compliance with all terms and conditions of its permit and pertinent laws and rules. On December 4, 2018, MarkWest's plan of corrective action was approved and incorporated into the terms and conditions of Order No. 8904.
- 7. On November 29, 2018, WVDEP personnel conducted an inspection of the facility. During the inspection, violations of the following sections of Legislative Rule and the permit were observed and documented:
 - a. Section B - MarkWest failed to comply with the approved SWPPP. Water bars were not in place as detailed by the approved SWPPP from 661+00 to 682+00.
 - b. Section G.4.e.2.- MarkWest failed to properly implement controls. Water bar outlets that did not extend past the installed perimeter controls as indicated in the approved SWPPP were noted from 812+00 to 889+00. This caused concentrated flow to follow the installed silt fence trench instead of discharging offsite in small quantities as designed.

- c. Section D.1. – MarkWest failed to operate and maintain all erosion control devices. The installed filter sock at a water bar terminus near 861+00 was not properly operated, which allowed sediment laden water to bypass the device.
- d. Section G.4.e.2.A.ii.j – MarkWest failed to prevent sediment-laden water from leaving the site without going through an appropriate device. Offsite sediment laden water that originated from the site was noted near 861+00 due to a bypass of a water bar terminus BMP.

As a result of the aforementioned violations, NOV No. W18-09-111-TJC was issued to MarkWest.

- 8. On February 19, 2019, WVDEP personnel and representatives of MarkWest met to discuss the terms and conditions of this Order.
- 9. On February 27, 2019, WVDEP personnel conducted an inspection of the facility. During the inspection, violations of the following sections of Legislative Rule and the permit were observed and documented:
 - a. Section B - MarkWest failed to comply with the approved SWPPP. Two (2) geotextile bags were being utilized in an area adjacent to 367+50 that was not well vegetated, and a geotextile lined flow path was not provided as indicated in the approved SWPPP. As a result, downstream erosion gullies had formed.
 - b. Section G.4.c - MarkWest failed to modify its SWPPP when the geotextile filter bag proved to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges.
 - c. Section G.4.e.2.A.ii.j – MarkWest failed to prevent sediment-laden water from leaving the site without going through an appropriate device. Sediment-laden water left the site as a result of the aforementioned ineffective geotextile filter bag.
 - d. 47CSR2 Section 3.2.a.- MarkWest caused conditions not allowable in waters of the State by creating distinctly visible settleable solids in Boggs Run (UNT 95) (39°21.161' X 80°39.549').

As a result of the aforementioned violations, NOV No. W19-09-017-TJC was issued to MarkWest.

ORDER FOR COMPLIANCE

Now, therefore, in accordance with Chapter 22, Article 11, Section 1 et seq. of the West Virginia Code, it is hereby agreed between the parties, and ORDERED by the Director:

- 1. MarkWest shall immediately take all measures to initiate compliance with all terms and conditions of its WV/NPDES permit and pertinent laws and rules.
- 2. Within twenty (20) days of the effective date of this Order, MarkWest shall submit for approval a proposal which includes provisions for proper remediation of all areas identified in this Order where conditions not allowable were observed and documented in waters of the State, as defined in WV Legislative Rule 47CSR2 Section 3.2. In addition,

the proposal shall include, but not be limited to, provisions for submittal of a report which documents that proper remediation of the aforementioned areas has occurred. The proposal shall make reference to Permit No. WV0116815, Registration No. WVR311004, and Order No. 8945 and shall be submitted to:

**Chief Inspector
Environmental Enforcement - Mail Code #031328
WVDEP
601 57th Street SE
Charleston, WV 25304**

Upon approval, the proposal shall be incorporated into and become part of this Order, as if fully set forth herein. Failure to submit an approvable proposal or failure to adhere to the proposal is a violation of this Order.

3. Because of MarkWest's West Virginia Code, Legislative Rule and permit violations, MarkWest shall be assessed a civil administrative penalty of one hundred twenty-four thousand thirty dollars (\$124,030) to be paid to the West Virginia Department of Environmental Protection for deposit in the Water Quality Management Fund within thirty (30) days of the effective date of this Order. Payments made pursuant to this paragraph are not tax-deductible for purposes of State or federal law. Payment shall include a reference to the Order No. and shall be mailed to:

**Chief Inspector
Environmental Enforcement - Mail Code #031328
WV-DEP
601 57th Street SE
Charleston, WV 25304**

OTHER PROVISIONS

1. MarkWest hereby waives its right to appeal this Order under the provisions of Chapter 22, Article 11, Section 21 of the Code of West Virginia. Under this Order, MarkWest agrees to take all actions required by the terms and conditions of this Order and consents to and will not contest the Director's jurisdiction regarding this Order. However, MarkWest does not admit to any factual and legal determinations made by the Director and reserves all rights and defenses available regarding liability or responsibility in any proceedings regarding MarkWest other than proceedings, administrative or civil, to enforce this Order.
2. The Director reserves the right to take further action if compliance with the terms and conditions of this Order does not adequately address the violations noted herein and reserves all rights and defenses which he may have pursuant to any legal authority, as well as the right to raise, as a basis for supporting such legal authority or defenses, facts other than those contained in the Findings of Fact.
3. If any event occurs which causes delay in the achievement of the requirements of this Order, MarkWest shall have the burden of proving that the delay was caused by

circumstances beyond its reasonable control which could not have been overcome by due diligence (i.e., force majeure). Force majeure shall not include delays caused or contributed to by the lack of sufficient funding. Within three (3) working days after MarkWest becomes aware of such a delay, notification shall be provided to the Director/Chief Inspector and MarkWest shall, within ten (10) working days of initial notification, submit a detailed written explanation of the anticipated length and cause of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and a timetable by which MarkWest intends to implement these measures. If the Director agrees that the delay has been or will be caused by circumstances beyond the reasonable control of MarkWest (i.e., force majeure), the time for performance hereunder shall be extended for a period of time equal to the delay resulting from such circumstances. A force majeure amendment granted by the Director shall be considered a binding extension of this Order and of the requirements herein. The determination of the Director shall be final and not subject to appeal.

4. Compliance with the terms and conditions of this Order shall not in any way be construed as relieving MarkWest of the obligation to comply with any applicable law, permit, other order, or any other requirement otherwise applicable. Violations of the terms and conditions of this Order may subject MarkWest to additional penalties and injunctive relief in accordance with the applicable law.
5. The provisions of this Order are severable and should a court or board of competent jurisdiction declare any provisions to be invalid or unenforceable, all other provisions shall remain in full force and effect.
6. This Order is binding on MarkWest, its successors and assigns.
7. This Order shall terminate upon MarkWest's notification of full compliance with the "Order for Compliance" and verification of this notification by WVDEP.


Gregory Bezdek, SVP, NE Region
MarkWest Liberty Midstream & Resources, L.L.C.

4/9/2019

Date

Public Notice begin:

Date

Public Notice end:

Date

Harold D. Ward, Acting Director
Division of Water and Waste Management

Date

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Project area south of the Riggins Run crossing showing a lack of installed water bars.



Project area south of the Riggins Run crossing showing erosion gullies as a result of the lack of installed water bars.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



BMP that has been overwhelmed south of the Riggings Run crossing as a result of a lack of installed water bars.



BMP that has been overwhelmed south of the Riggings Run crossing as a result of a lack of installed water bars.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Project area north of the Riggins Run crossing showing a lack of installed water bars.



Project area in the Franks Run watershed near 826+00 showing a lack of installed water bars.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Project area adjacent to 442+00 showing a lack of water bar terminus BMPs.



Project area adjacent to 813+50 showing a lack of water bar terminus BMPs.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Project area in the Flint Run watershed showing a lack of water bar terminus BMPs.



Project area on AR-10 in the Flint Run watershed showing a lack of water bar terminus BMPs.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Project area in the Morgans Run watershed showing a lack of water bar terminus BMPs.

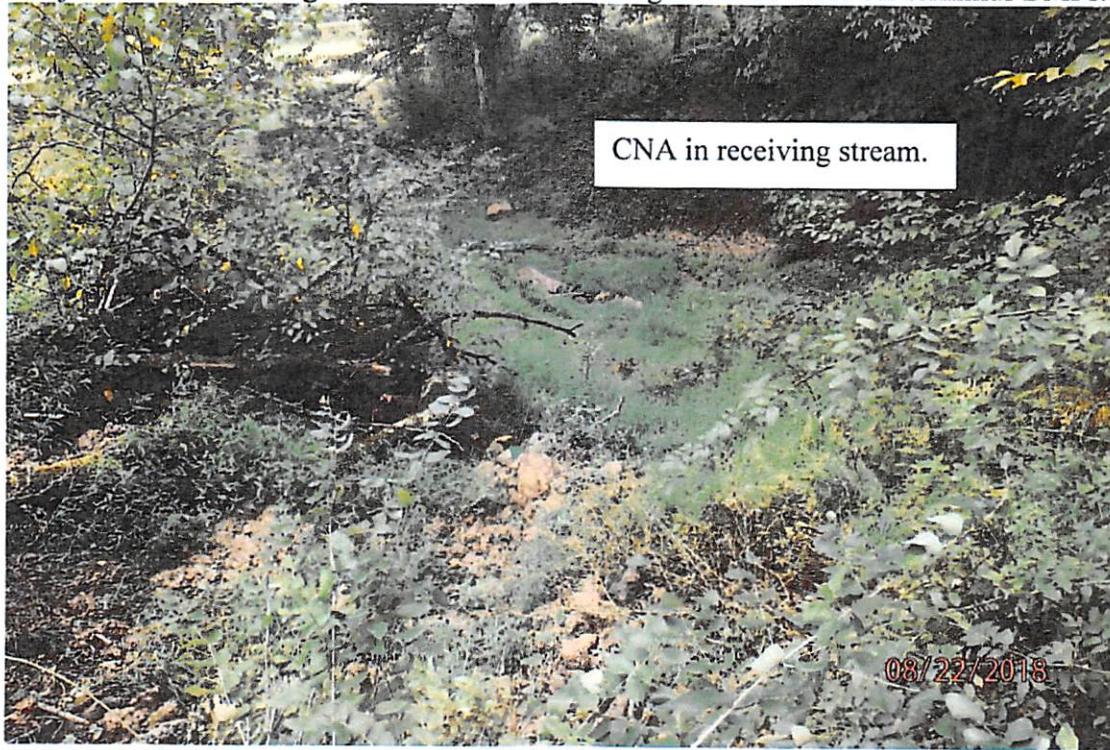


Project area in the Morgans Run watershed showing offsite deposits that lead to the receiving stream as a result of a lack of water bar terminus BMPs.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Project area in the Morgans Run watershed showing a lack of water bar terminus BMPs.



CNA deposits in UNT Morgans Run (UNT 160) ($39^{\circ} 18.488'$ X $80^{\circ} 40.335'$) as a result of a lack of installed water bar terminus BMPs.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



CNA deposits in UNT Morgans Run (UNT 160) ($39^{\circ} 18.488'$ X $80^{\circ} 40.335'$) as a result of a lack of installed water bar terminus BMPs



CNA deposits in UNT Morgans Run (UNT 160) ($39^{\circ} 18.488'$ X $80^{\circ} 40.335'$) as a result of a lack of installed water bar terminus BMPs.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Water bar in the Morgans Run watershed that was installed at a steep angle showing erosion of the BMP.



Overwhelmed water bar terminus BMP as a result of excessive erosion from the above pictured water bar.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Water bar in the Morgans Run watershed that was installed at a steep angle showing erosion of the BMP.



Overwhelmed water bar terminus BMP as a result of excessive erosion and increased water velocity from the above pictured water bar.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Improperly installed water bar near 857+00 that does not shed stormwater off of the LOD in small quantities as designed.



Improperly installed water bar near 857+00 that terminates prior to the installed perimeter controls and does not shed stormwater off of the LOD in small quantities as designed.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



BMP in need of maintenance near 203+00.



BMP in need of maintenance in the Flint Run watershed.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Water bar in need of maintenance in the Flint Run watershed.



Water bar in need of maintenance in the Flint Run watershed and the associated fill slope erosion.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



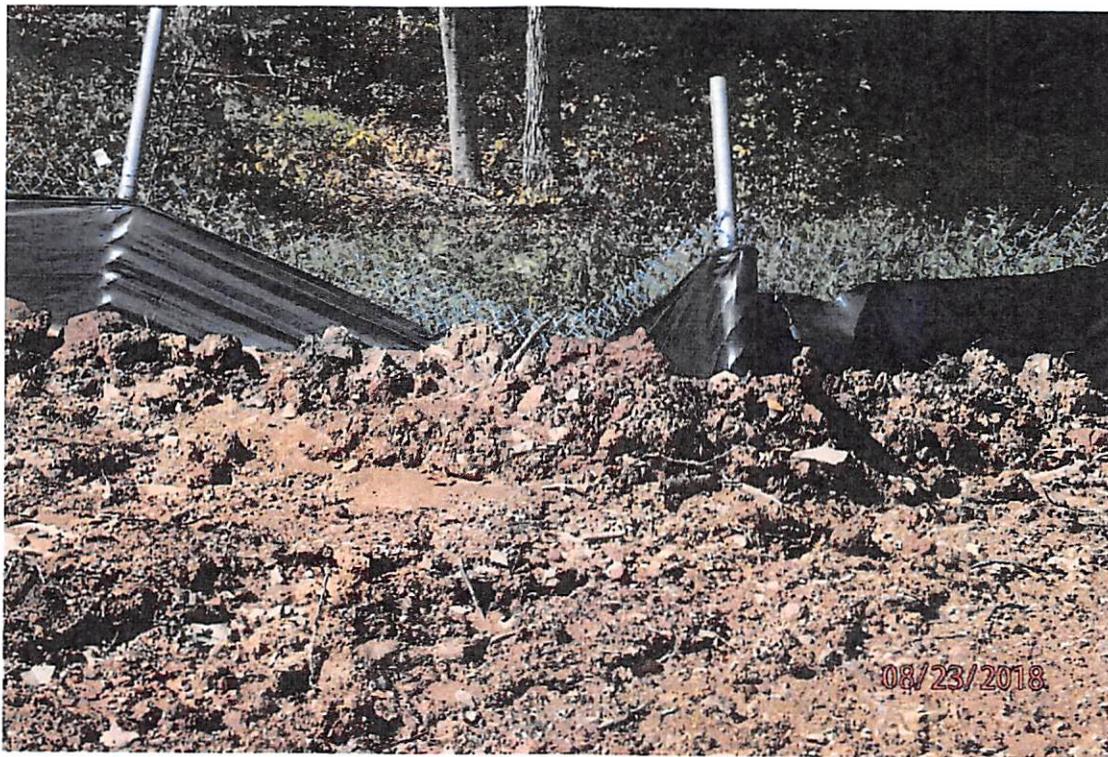
08/22/2018

Water bars in need of maintenance (No activity for several days according to site rep.) near 437+00.

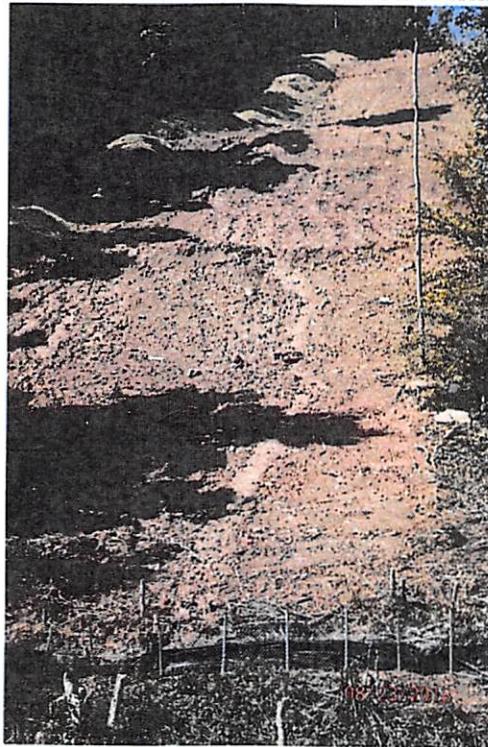


Perimeter control near 863+00 in need of maintenance.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Perimeter control in need of maintenance in the Beverlin Fork watershed.



Water bars in need of maintenance in the Beverlin Fork watershed and the associated fill slope erosion.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Installed perimeter control that needs to be extended adjacent to AR-2.



Area adjacent to 158+50 where sediment laden water is leaving the site and no BMP is indicated on the approved SWPPP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Project area adjacent to 145+00 where sediment laden water is leaving the site and no BMP is indicated on the approved SWPPP.



Offsite sediment deposits originating from the above pictured area.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Installed perimeter control that needs to be extended in the Flint Run watershed.



Installed perimeter control that needs to be extended adjacent to 287+95.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

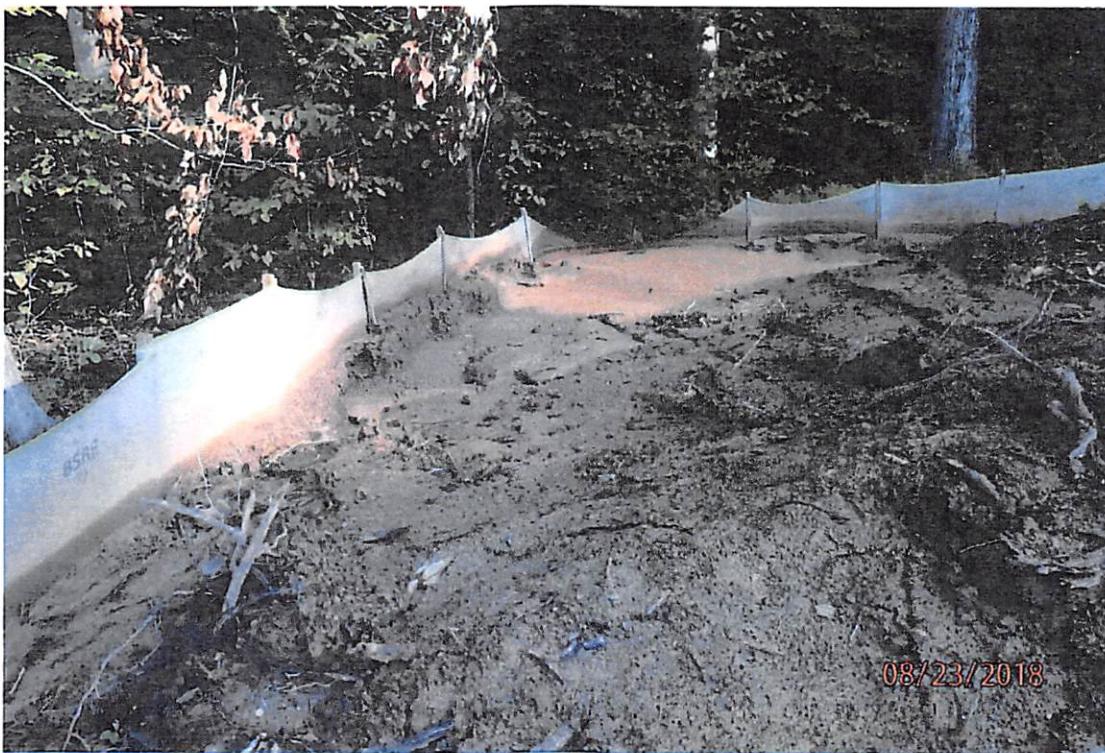


Project area adjacent to 272+00 where sediment laden water is leaving the site and no BMP is indicated on the approved SWPPP.



CNA deposits in UNT Flint Run (UNT 94 near 272+00) ($39^{\circ} 20.051'$ X $80^{\circ} 39.945'$).

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



BMP adjacent to 365+00 that has proven to be inadequate and is in need of maintenance.



Offsite sediment deposits that lead to the receiving stream as a result of the above pictured deficiency.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

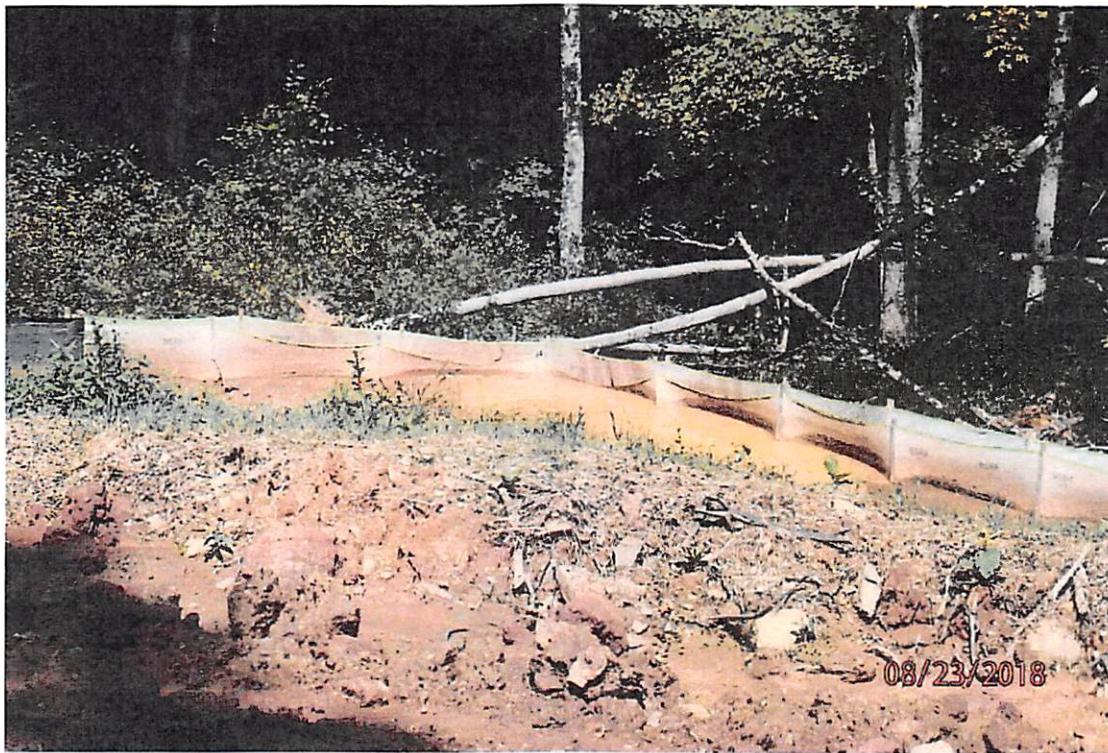


CNA deposits and distinctly visible settleable solids in UNT Beverlin Fork (UNT 129) (39° 26.346' X 80° 36.157').



CNA deposits and distinctly visible settleable solids in UNT Beverlin Fork (UNT 129) (39° 26.346' X 80° 36.157') as a result of the previously pictured priority 1 silt fence failure.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

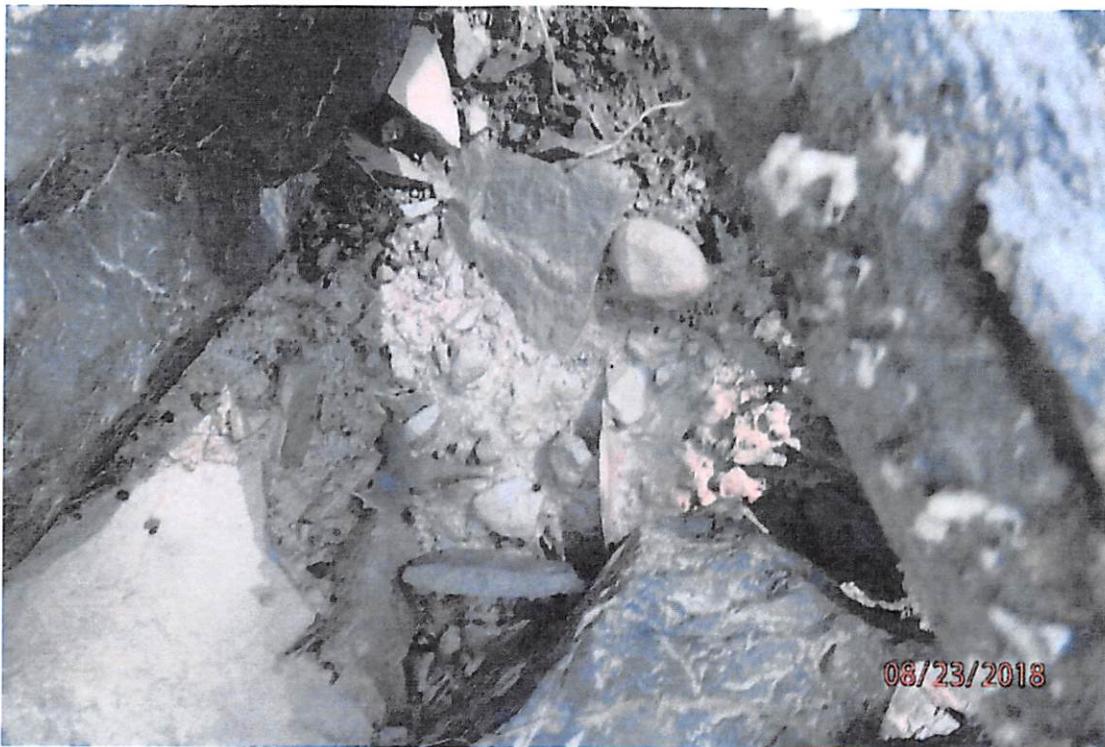
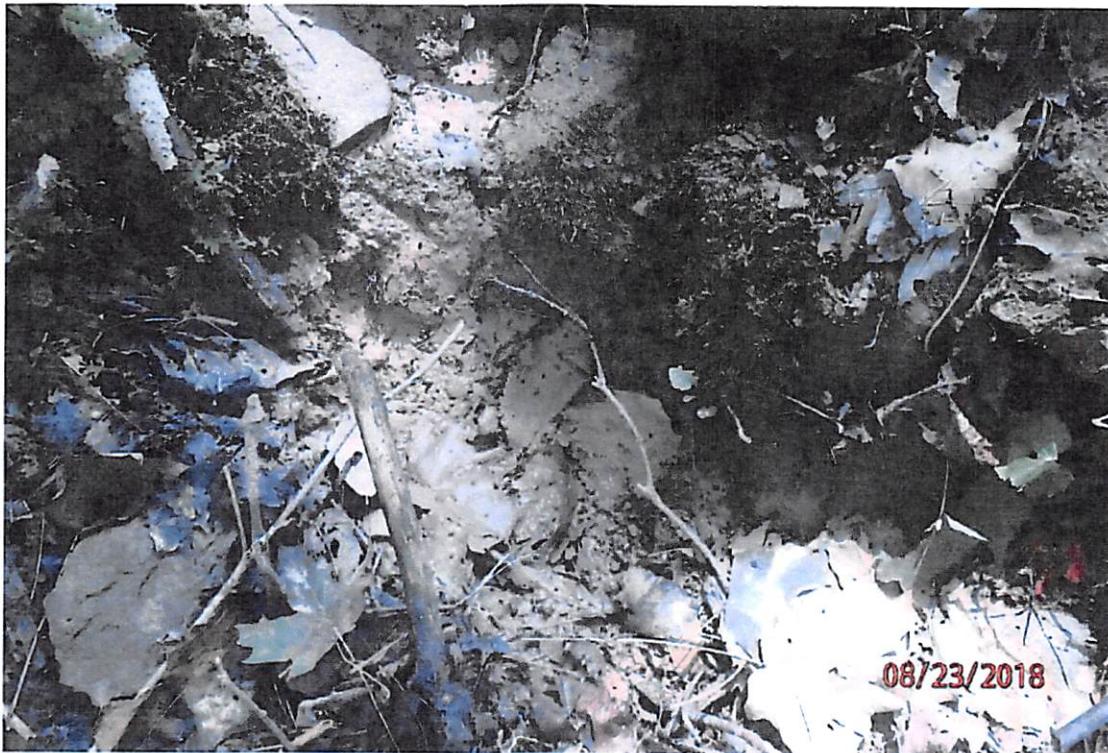


BMP adjacent to 798+60 (Franks Run watershed) that has proven to be inadequate and is in need of maintenance.



Offsite sediment deposits that lead to the receiving stream as a result of the above pictured BMP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Offsite CNA deposits in UNT Franks Run (Adjacent to 798+60) ($39^{\circ} 26.011'$ X $80^{\circ} 36.969'$) resulting from the previously pictured deficiency.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Installed diversion berm near 57+00 that lacks adequate outlets. Area also lacks water bars on the approved SWPPP.



Diversion berm outlet near 57+00 that has been overwhelmed. Offsite sediment deposits were noted.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Diversion berm outlet terminus BMP that has been overwhelmed as a result of excessive flow due to inadequate outlets adjacent to 57+00.



Offsite sediment deposits as a result of the above pictured deficiency.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Installed diversion berm in the Morgans Run watershed that lacks adequate outlets.



Installed diversion berm in the Morgans Run watershed that lacks adequate outlets.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

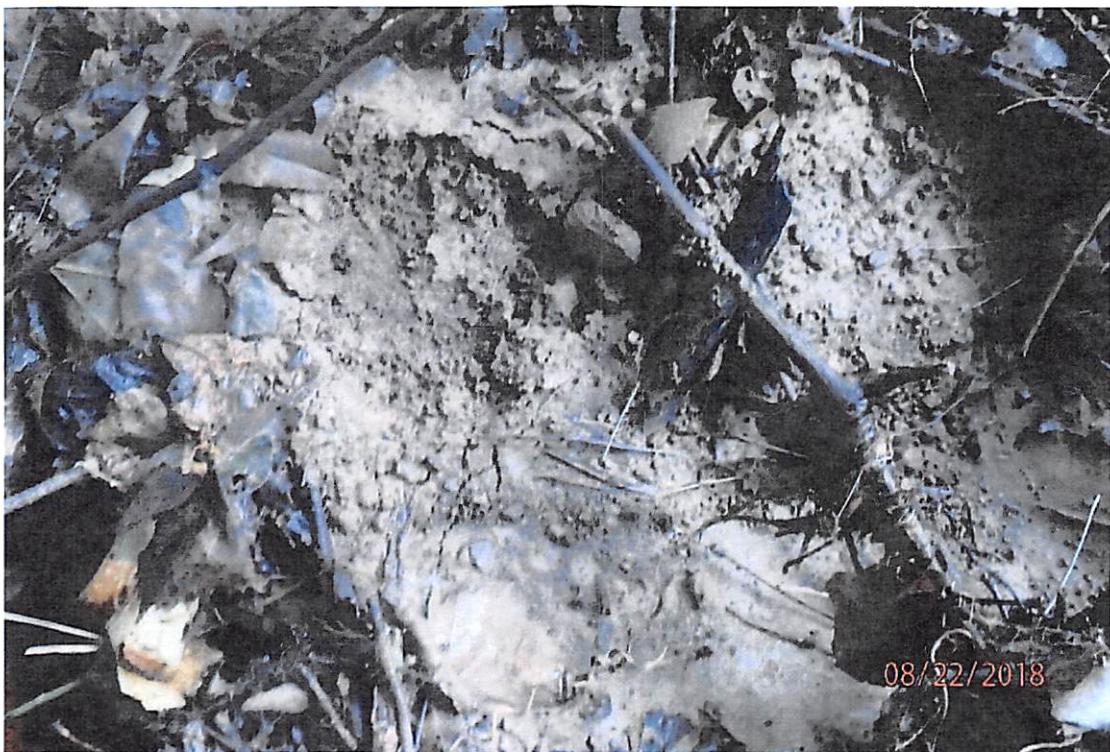


Overview of improperly installed BMP that caused CNA in UNT Morgans Run.



Overview of improperly installed BMP that caused CNA in UNT Morgans Run showing offsite sediment deposits and areas of bypass.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Offsite CNA deposits in UNT Morgans Run ($39^{\circ} 17.638'$ X $80^{\circ} 40.727'$) as a result of the previously pictured BMP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

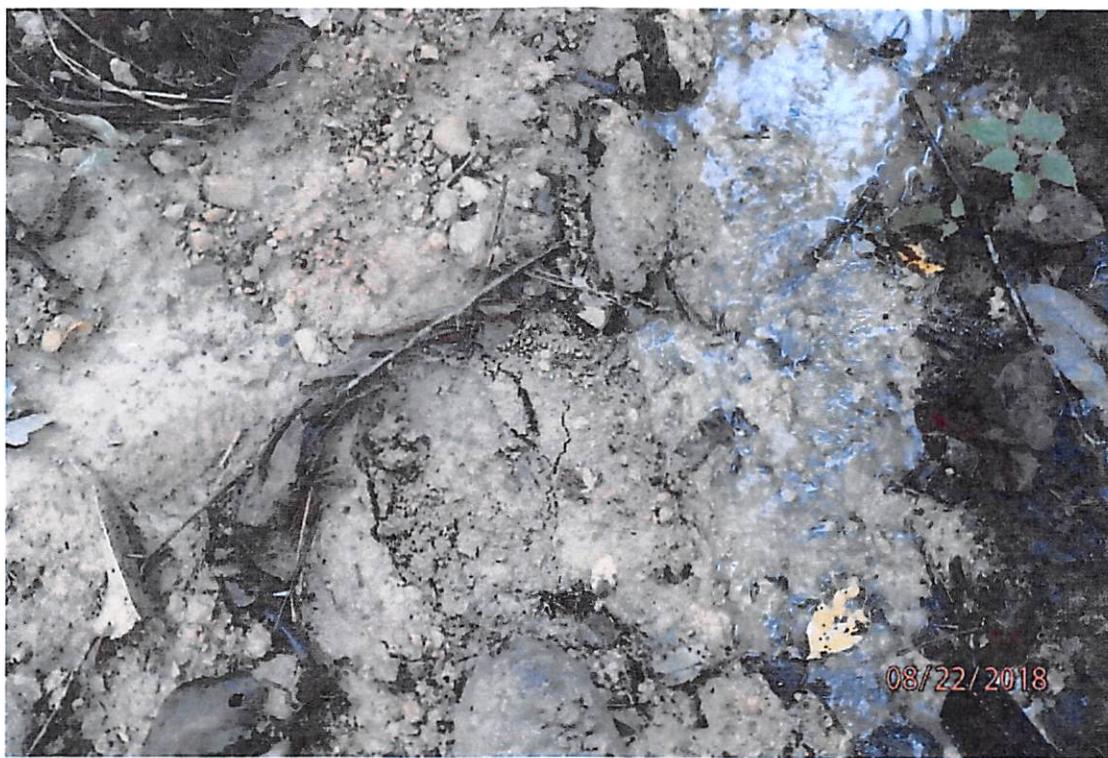


Fill slope erosion adjacent to UNT 108 as a result of concentrated flow from a water bar outlet.



BMP that has been overwhelmed as a result of the above pictured fill slope erosion. Offsite sediment deposits leading to the receiving stream were noted.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Offsite CNA deposits in UNT Righthand Fork of Morgans Run (UNT 108) ($39^{\circ} 17.955'$ X $80^{\circ} 40.580'$)
resulting from the previously pictured deficiencies.



Offsite CNA deposits in UNT Righthand Fork of Morgans Run (UNT 108) ($39^{\circ} 17.955'$ X $80^{\circ} 40.580'$)
resulting from the previously pictured deficiencies.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



BMP that has been overwhelmed as a result of fill slope erosion.

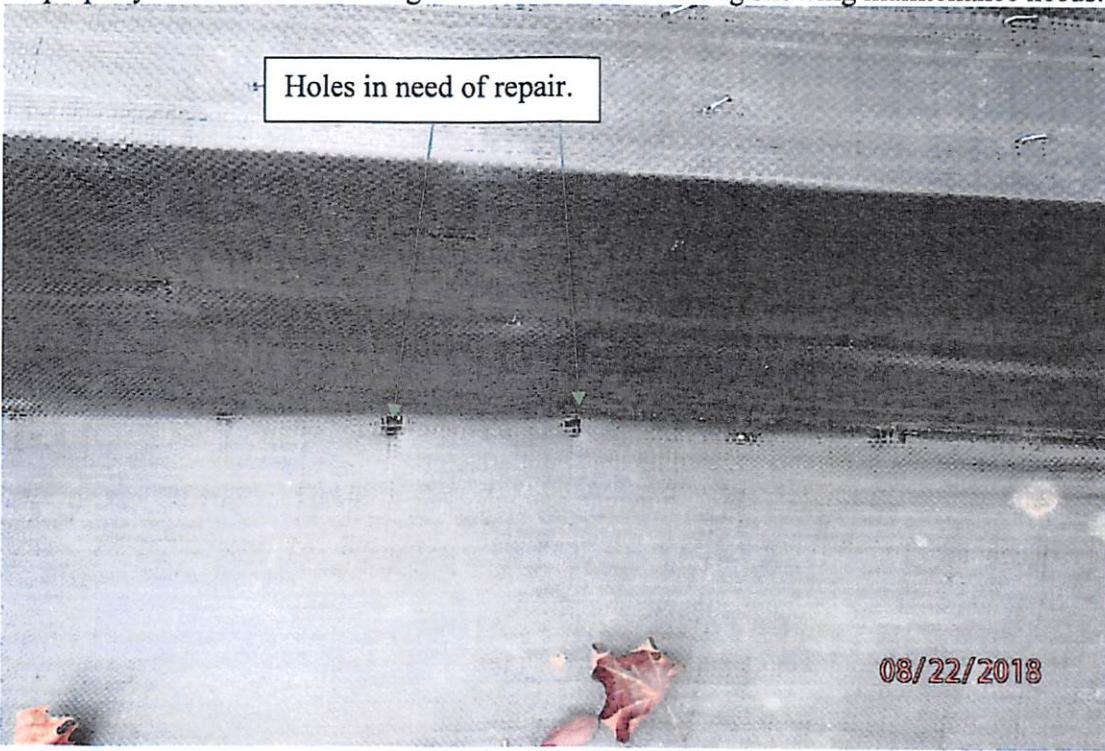


Offsite CNA deposits in UNT Righthand Fork of Morgans Run (UNT 108) ($39^{\circ} 17.955'$ X $80^{\circ} 40.580'$)
resulting from the previously pictured deficiencies.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Improperly installed timber bridge at the Flint Run crossing showing maintenance needs.



Improperly installed timber bridge at the Flint Run crossing showing maintenance needs.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Overview of improperly installed timber bridge at the UNT Riggins Run (UNT 98) crossing.



Picture showing maintenance need as a result of the improperly constructed bridge at the UNT Riggins Run (UNT 98) crossing.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Overview of construction work associated with the project that is located off LOD near 277+00.



Overview of construction work associated with the project that is located off LOD near 277+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Installed timber mat bridge at crossing 41 (UNT 18) that is not tied in properly.



Installed timber mat bridge at crossing 41 (UNT 18) that is not tied in properly.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

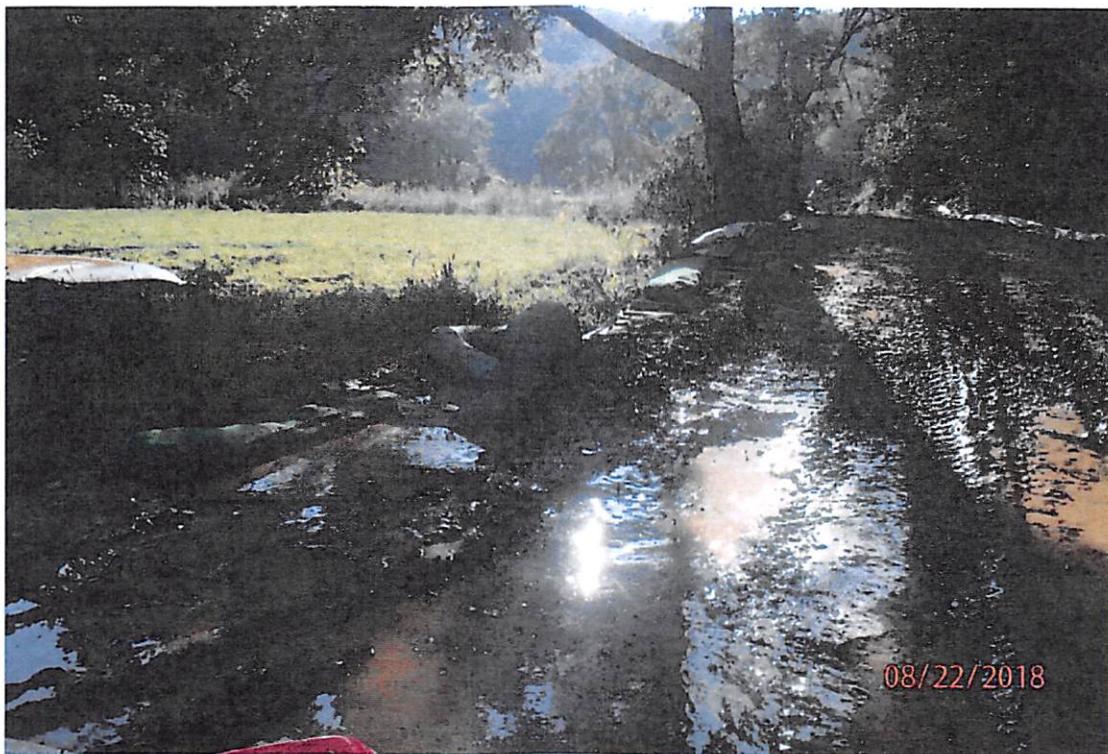


Installed timber mat bridge at crossing 43 (Riggins Run) that is not tied in properly.



Installed timber mat bridge at crossing 43 (Riggins Run) that is not tied in properly.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

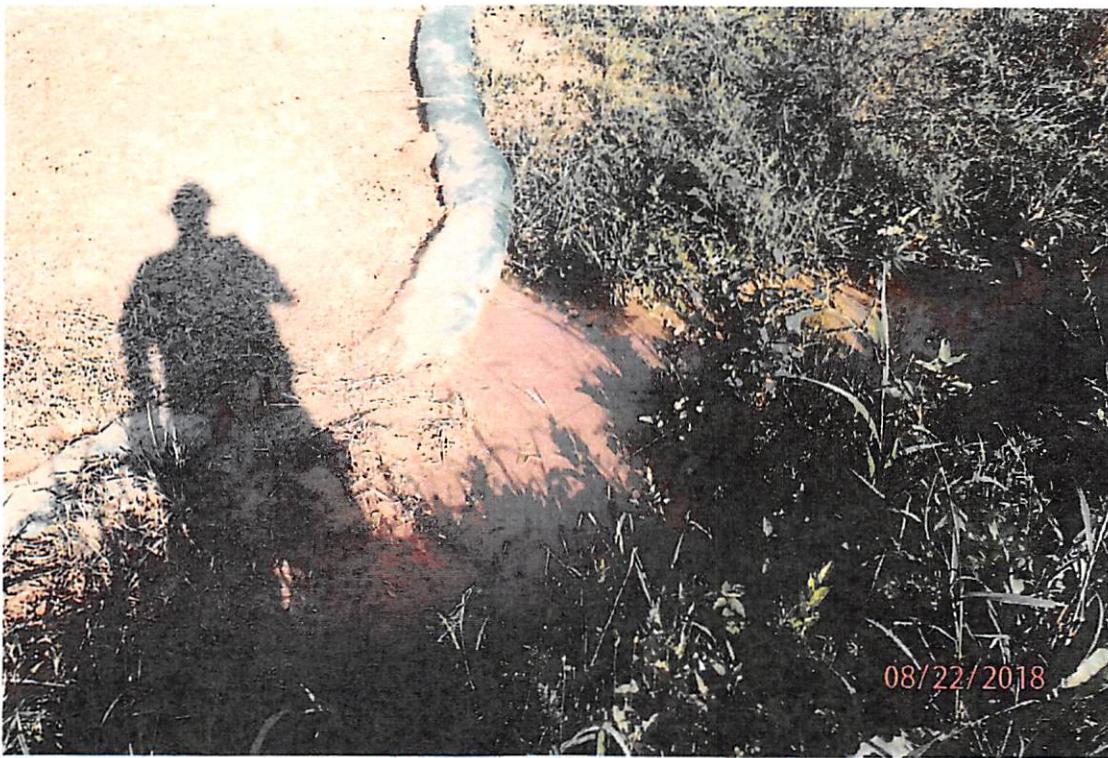


AR 40 showing a lack of stabilization that is described in the approved SWPPP.



AR 40 showing a lack of stabilization that is described in the approved SWPPP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Offsite sediment deposits that lead to the receiving stream as a result of AR 40 deficiencies.



Offsite sediment deposits that lead to the receiving stream as a result of AR 40 deficiencies.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

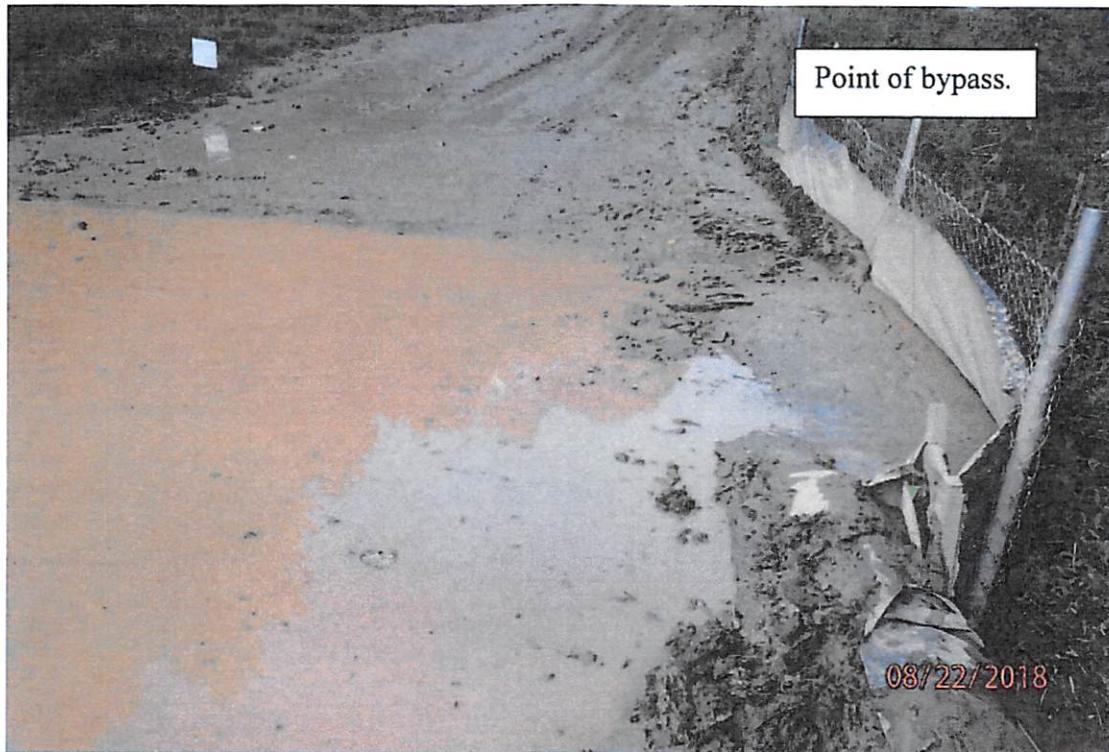


AR 40 showing a lack of stabilization and a lack of water bars.



UNT 127 crossing on AR 40 showing area where CNA occurred as a result of above pictured deficiencies.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



AR 40 crossing of UNT 127 where BMP failure allowed sediment to leave site into receiving stream.



Offsite CNA deposits and distinctly visible settleable solids in UNT Franks Run (39° 26.230' X 80° 36.769').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Overview of dewatering BMP adjacent to UNT 127.



Offsite sediment trail leading from the dewatering bag to the receiving stream.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Water quality in UNT Franks Run upstream of dewatering activity.



Offsite CNA deposits and distinctly visible settleable solids in UNT Franks Run (39° 26.167' X 80° 36.861') downstream of the dewatering activity.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Offsite CNA deposits and distinctly visible settleable solids in UNT Franks Run ($39^{\circ} 26.167'$ X $80^{\circ} 36.861'$) downstream of the dewatering activity.



Offsite CNA deposits and distinctly visible settleable solids in UNT Franks Run ($39^{\circ} 26.167'$ X $80^{\circ} 36.861'$) downstream of the dewatering activity.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Area of open pipe trench that led to the need for the previously pictured dewatering operation in UNT Franks Run watershed.



Area of open pipe trench that led to the need for the previously pictured dewatering operation in UNT Franks Run watershed. This area lacked the installed water bars that was described in the approved SWPPP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Overview of dewatering adjacent to UNT Beverly Fork (UNT129).



Offsite sediment deposits below dewatering bag that lead to the receiving stream.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

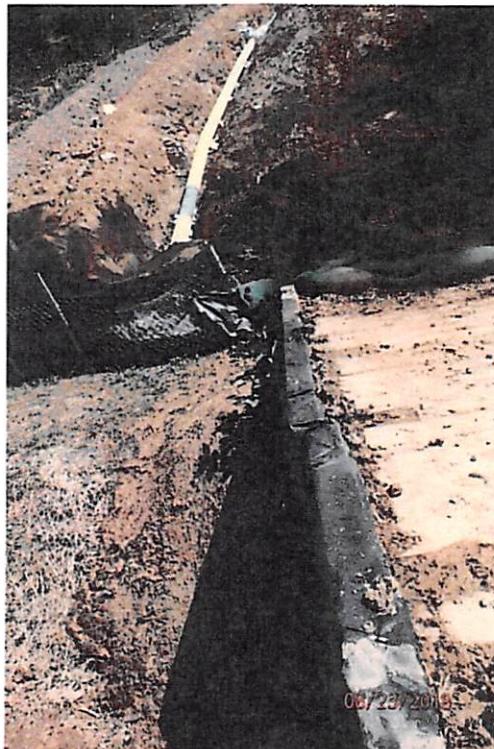


Offsite sediment deposits below dewatering bag that lead to the receiving stream at UNT 129.



Offsite CNA deposits were noted in UNT Beverlin Fork ($39^{\circ} 26.280'$ X $80^{\circ} 36.183'$) as a result of the dewatering operation.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



BMPs that were overwhelmed due to flow from the open pipe trench adjacent to crossing #23 (UNT 133).



BMPs that were overwhelmed due to flow from the open pipe trench adjacent to crossing #23 (UNT 133) that led to offsite CNA.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018



Improperly installed water bar terminus BMP that allowed sediment laden water to bypass it adjacent to crossing #23 (UNT 133).



Improperly installed water bar terminus BMP that allowed sediment laden water to bypass it adjacent to crossing #23 (UNT 133).

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C, WVR311004, Sherwood to Mobley
20" NGL, 8/22 & 8/23/2018

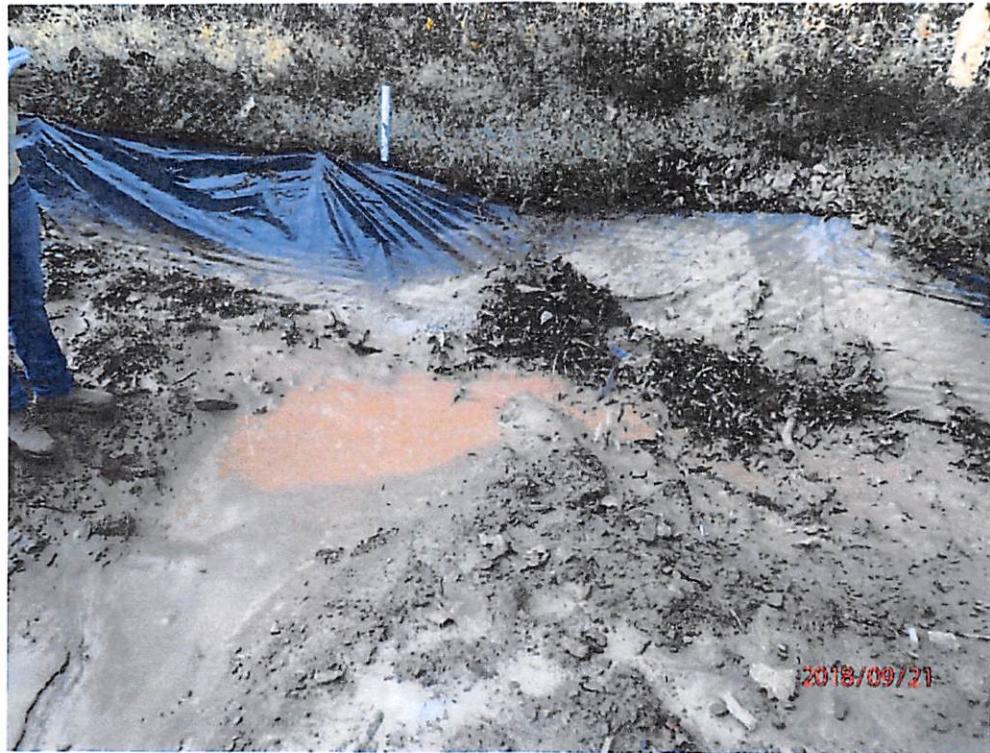


UNT Franks Run (UNT 133) upstream of crossing #23.



UNT Franks Run (UNT 133) downstream of crossing #23. Offsite CNA deposits in UNT Franks Run
($39^{\circ} 25.885'$ X $80^{\circ} 37.133'$) pictured.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
9/21/2018



Sediment leaving project through super silt fence in need of maintenance near Archers Fork access.



Sediment leaving project through super silt fence in need of maintenance near Aches Fork Road.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
9/21/2018



Super silt fence in need of maintenance near Route 20 bore site.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Water bar terminus BMP in need of maintenance and associated offsite sediment deposits in the Riggins Run watershed.



Perimeter control in need of maintenance in the Riggins Run watershed.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Water bar terminus BMP in need of maintenance in the Buckeye Creek watershed.



Perimeter control in need of maintenance in the Buckeye Creek watershed.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Perimeter control in need of maintenance in the Morgans Run watershed.



Water bar terminus BMP in need of maintenance and associated offsite sediment deposits in the Flint Run watershed.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Water bar terminus BMP in need of maintenance adjacent to 153+00.



Offsite sediment deposits downslope of water bar terminus BMP adjacent to 153+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018

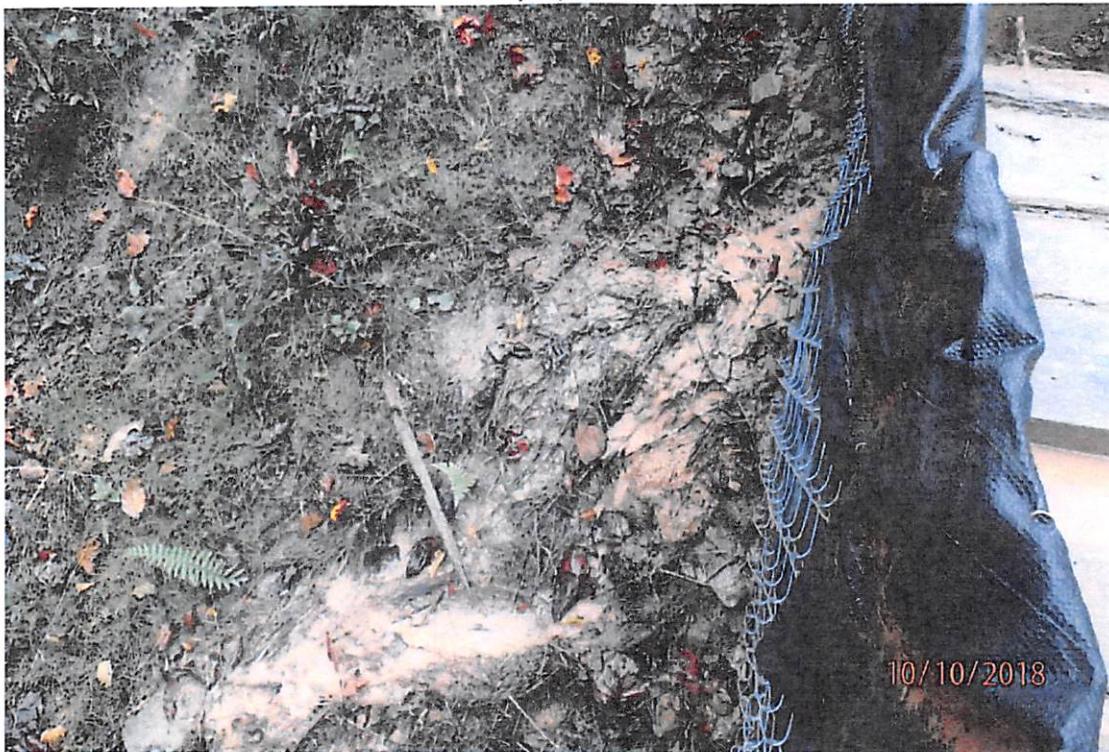


Perimeter control in need of maintenance in the Flint Run watershed.

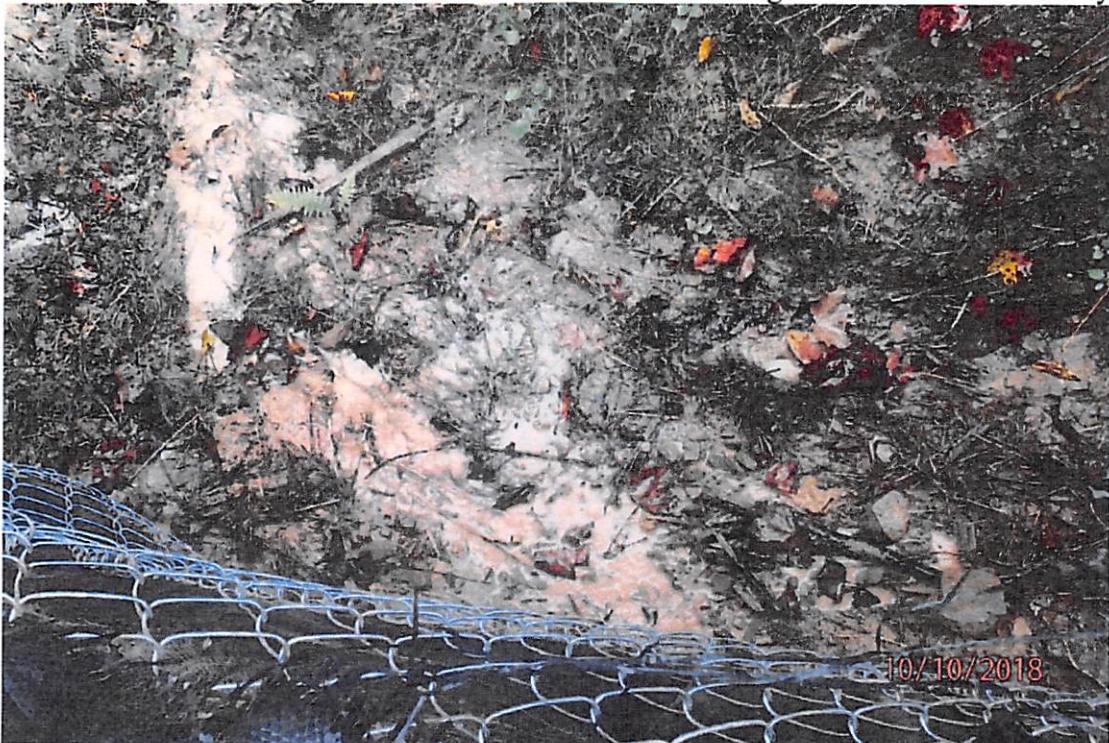


Perimeter control in need of maintenance in the Flint Run watershed.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Timber mat bridge at crossing # 46 in need of maintenance showing a sediment laden water bypass.



Timber mat bridge at crossing # 46 in need of maintenance showing a sediment laden water bypass.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Perimeter control adjacent to 409+00 showing sediment laden water bypassing under the device.



Perimeter control adjacent to 409+00 showing sediment laden water bypassing under the device.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Sediment laden water passing through an unmaintained perimeter control adjacent to 872+00.



Offsite sediment deposits and sediment laden water that has bypassed the above pictured device adjacent to 872+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Overview of installed BMPs adjacent to UNT Buckeye Creek (UNT59).

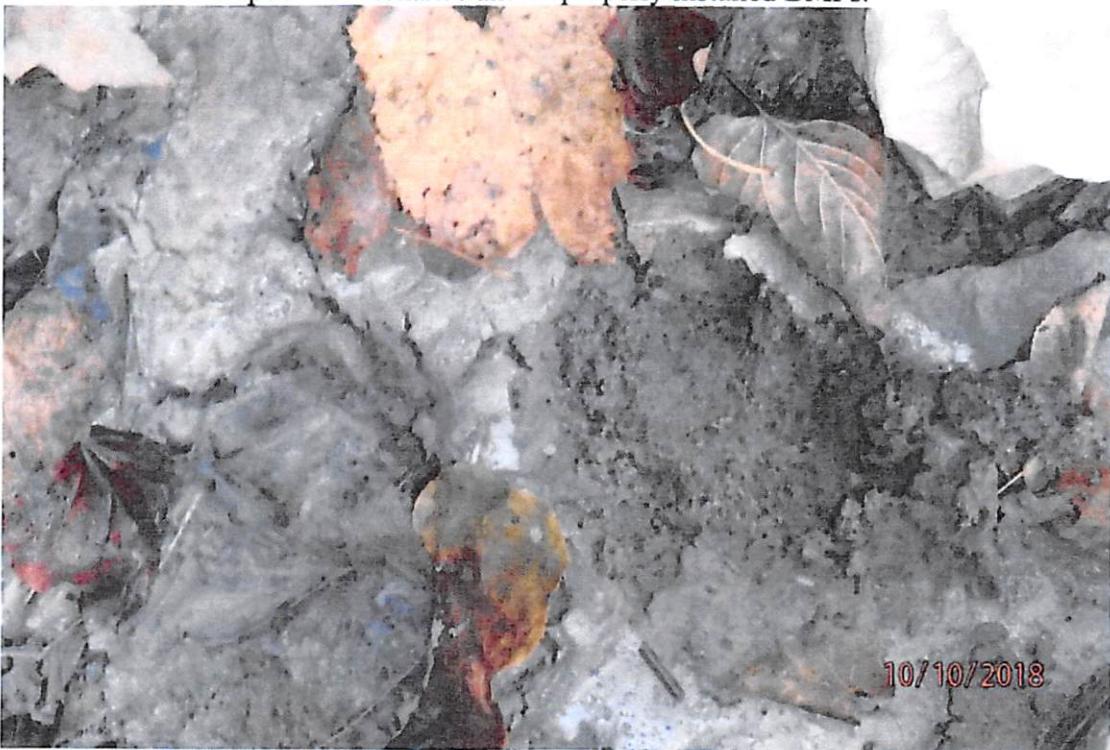


Overview of installed BMPs adjacent to UNT Buckeye Creek (UNT59) showing offsite sediment due to poor maintenance and improperly installed BMPs.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 & 10/11/2018



Overview of installed BMPs adjacent to UNT Buckeye Creek (UNT59) showing offsite sediment due to poor maintenance and improperly installed BMPs.



Offsite CNA deposits in UNT Buckeye Creek (UNT59) ($39^{\circ}16.844'$ X $80^{\circ}41.115'$).

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



BMP adjacent to UNT Morgans Run that is in need of maintenance.



View of above pictured BMP from downslope showing rocks that are being utilized in an attempt to plug an area where sediment laden water is bypassing the BMP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Offsite CNA deposits in UNT Morgans Run ($39^{\circ}17.640'$ X $80^{\circ}40.738'$) as a result of the previously pictured BMP.



Offsite CNA deposits in UNT Morgans Run ($39^{\circ}17.640'$ X $80^{\circ}40.738'$) as a result of the previously pictured BMP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



BMP in need of maintenance that resulted in CNA in UNT Righthand Fork of Morgans Run (UNT 2)
(39°17.932' X 80°40.600').



BMP in need of maintenance that resulted in CNA in UNT Righthand Fork of Morgans Run (UNT 2)
(39°17.932' X 80°40.600').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018

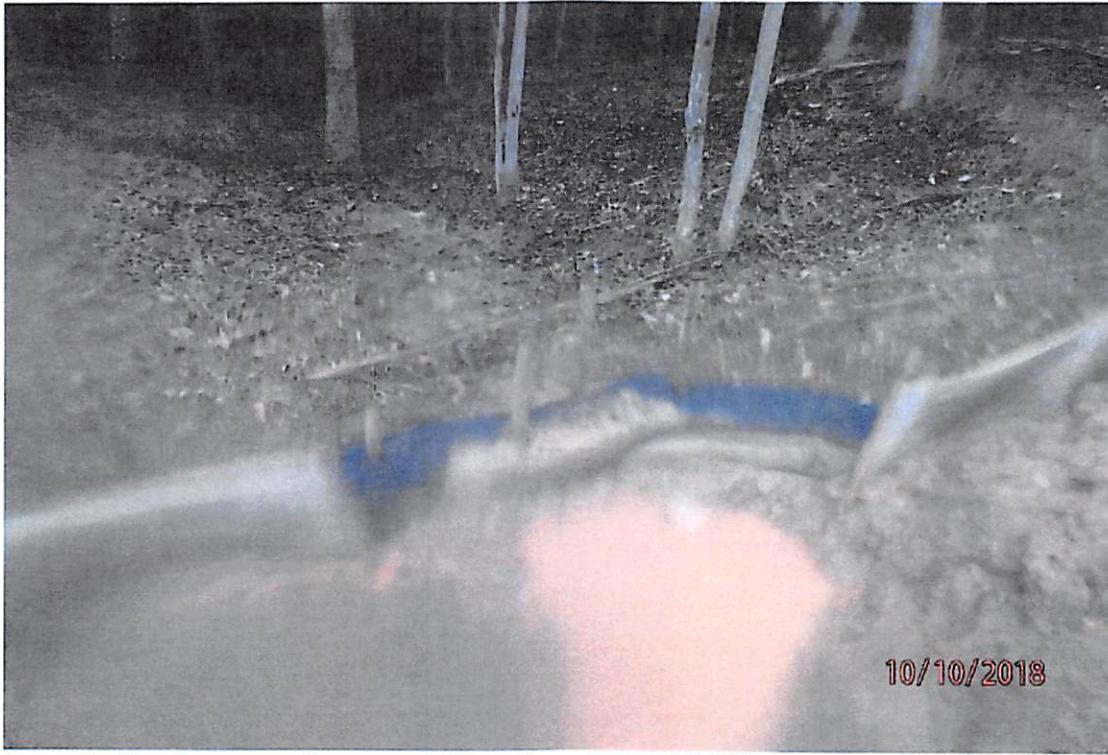


BMP in need of maintenance that resulted in CNA in UNT Righthand Fork of Morgans Run (UNT 2)
($39^{\circ}17.932'$ X $80^{\circ}40.600'$).

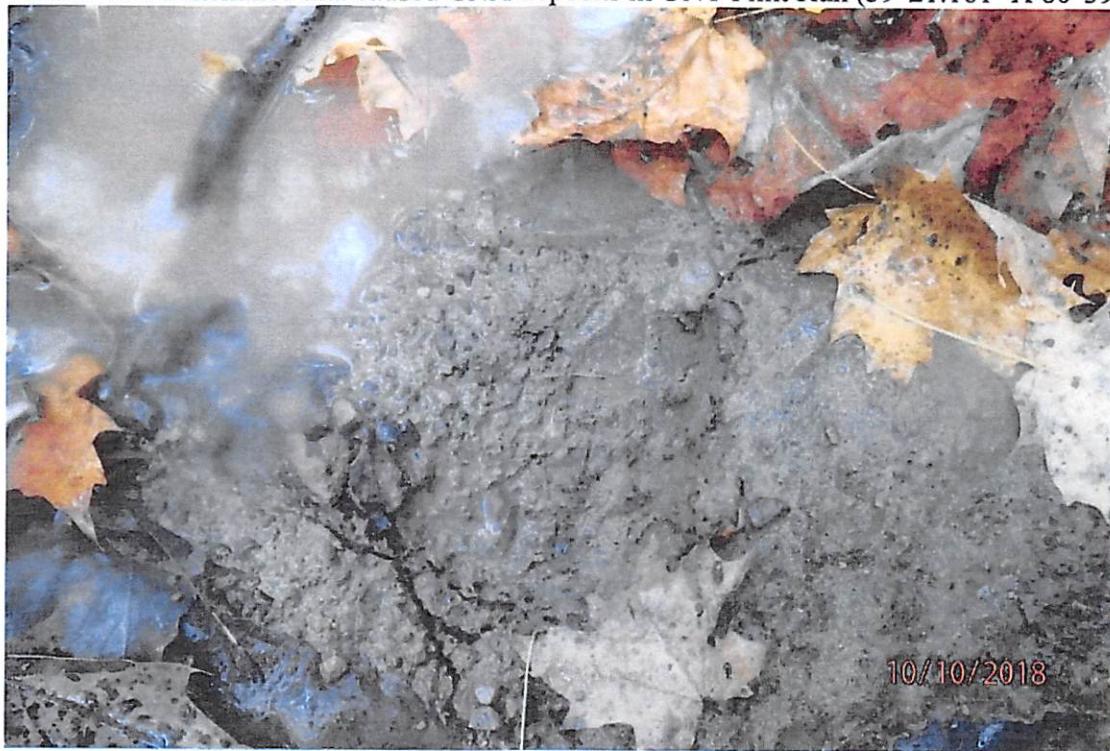


Offsite CNA deposits in UNT Righthand Fork of Morgans Run (UNT 2) ($39^{\circ}17.932'$ X $80^{\circ}40.600'$).

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



BMP in need of maintenance that caused CNA deposits in UNT Flint Run (39°21.161' X 80°39.549')



Offsite CNA deposits in UNT Flint Run (39°21.161' X 80°39.549').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



BMP in need of maintenance that caused CNA in UNT Flint Run ($39^{\circ}21.223'$ X $80^{\circ}39.649'$).



Downslope view of above pictured BMP showing rocks that have been placed in an area where sediment laden water is bypassing the BMP in an attempt to plug the area of bypass.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



UNT Flint Run downslope of the BMP in need of maintenance.



Offsite CNA deposits in UNT Flint Run ($39^{\circ}21.223'$ X $80^{\circ}39.649'$) as a result of the previously pictured BMP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 & 10/11/2018



Sediment laden water bypassing an unmaintained and poorly operated water bar terminus BMP adjacent to UNT Franks Run ($39^{\circ}25.922'$ X $80^{\circ}37.079'$).

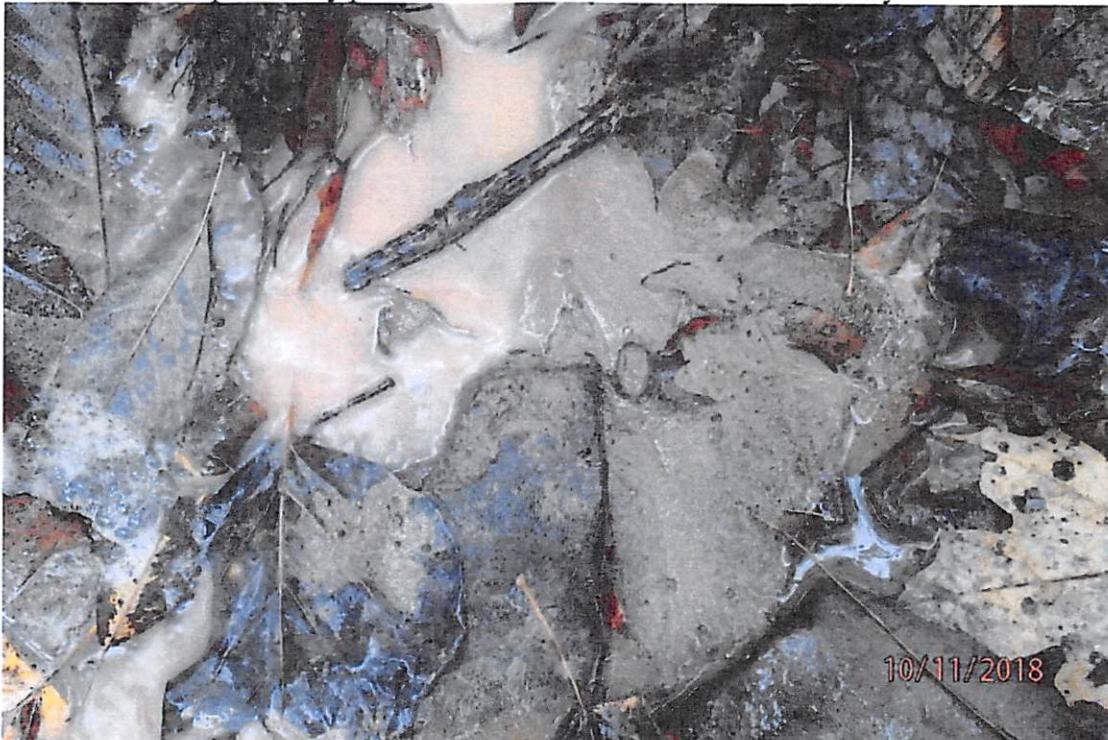


Sediment laden water bypassing an unmaintained and poorly operated water bar terminus BMP adjacent to UNT Franks Run ($39^{\circ}25.922'$ X $80^{\circ}37.079'$).

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



CNA distinctly visible settleable solids in UNT Franks Run ($39^{\circ}25.922'$ X $80^{\circ}37.079'$) as a result of the previously pictured water bar terminus BMP deficiency.



CNA deposits in UNT Franks Run ($39^{\circ}25.922'$ X $80^{\circ}37.079'$) as a result of the previously pictured water bar terminus BMP deficiency.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Perimeter controls in need of maintenance that are allowing sediment laden water to bypass under the device adjacent to UNT Franks Run (UNT127) (39°26.234' X 80°36.756').



Perimeter controls in need of maintenance that are allowing sediment laden water to bypass under the device adjacent to UNT Franks Run (UNT127) (39°26.234' X 80°36.756').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Offsite CNA distinctly visible settleable solids in UNT Franks Run (UNT127) (39°26.234' X
80°36.756').



Offsite CNA distinctly visible settleable solids in UNT Franks Run (UNT127) (39°26.234' X
80°36.756').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Open pipe trench adjacent to UNT 21 that is placing concentrated flow over a fill slope and overwhelming the installed perimeter controls adjacent to the stream.



Perimeter controls adjacent to UNT 21 that are overwhelmed from trench water and a lack of maintenance.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018

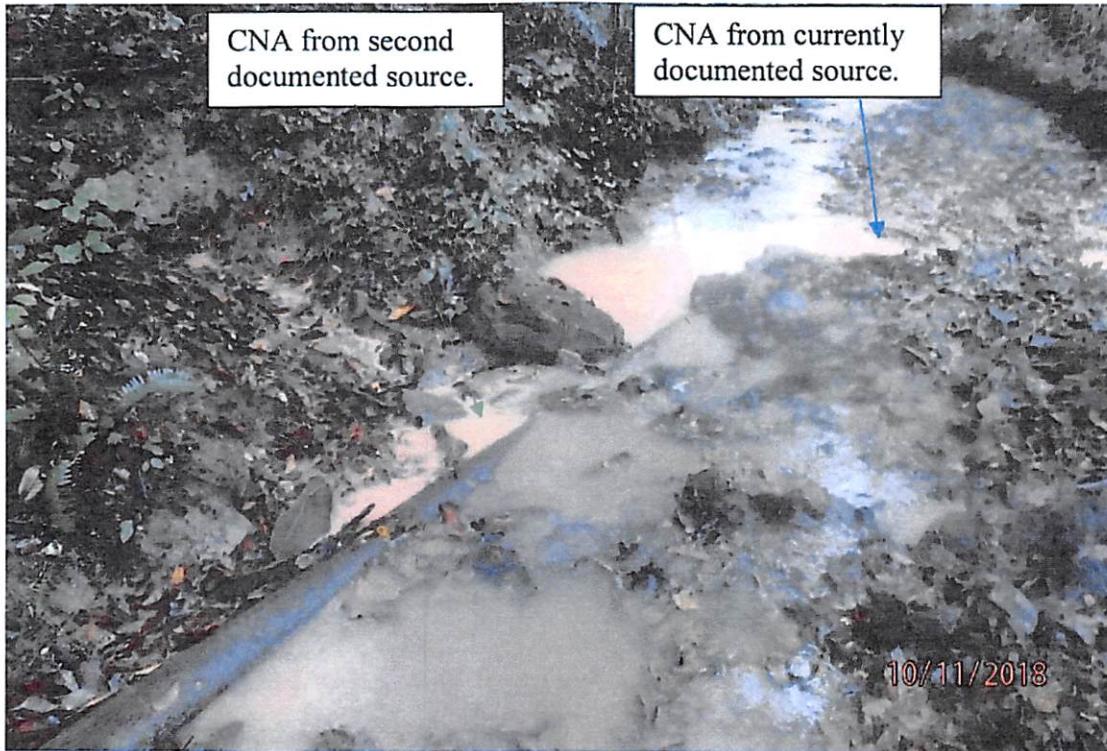


Offsite sediment laden water draining to the receiving stream (UNT 21).

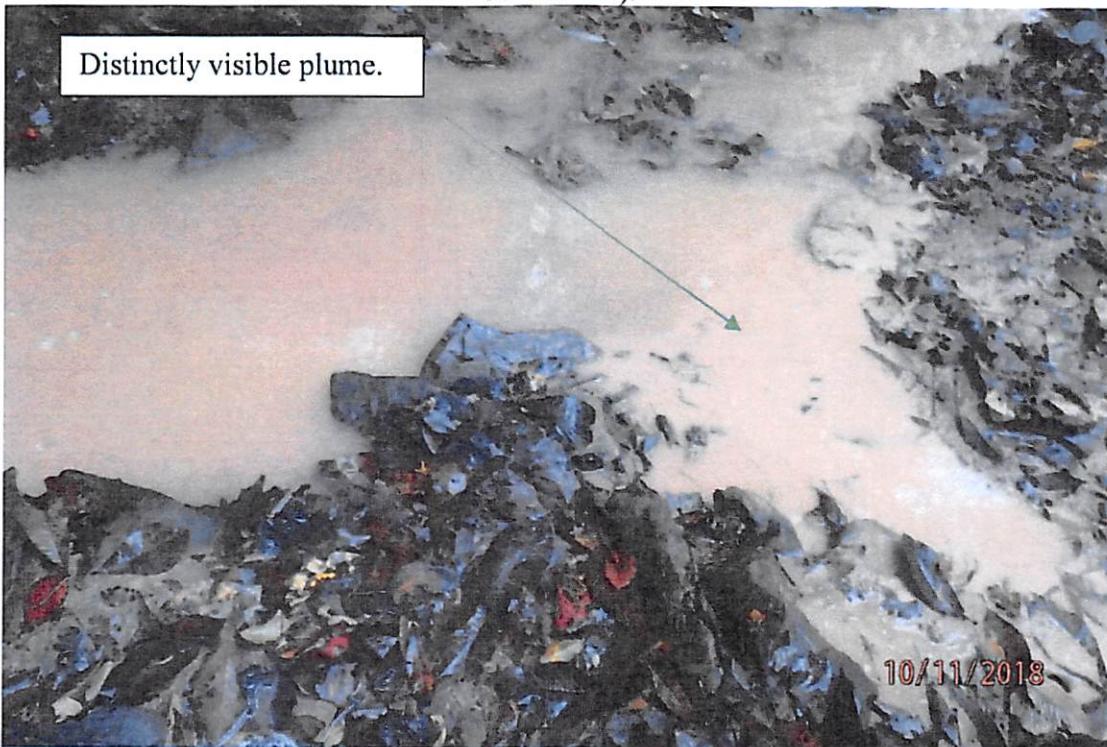


Offsite CNA deposits in UNT Beverlin Fork (UNT 21) (39°26.296' X 80°36.165').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 & 10/11/2018



Offsite CNA distinctly visible settleable solids in UNT Beverlin Fork (UNT 21) ($39^{\circ}26.296'$ X $80^{\circ}36.165'$).

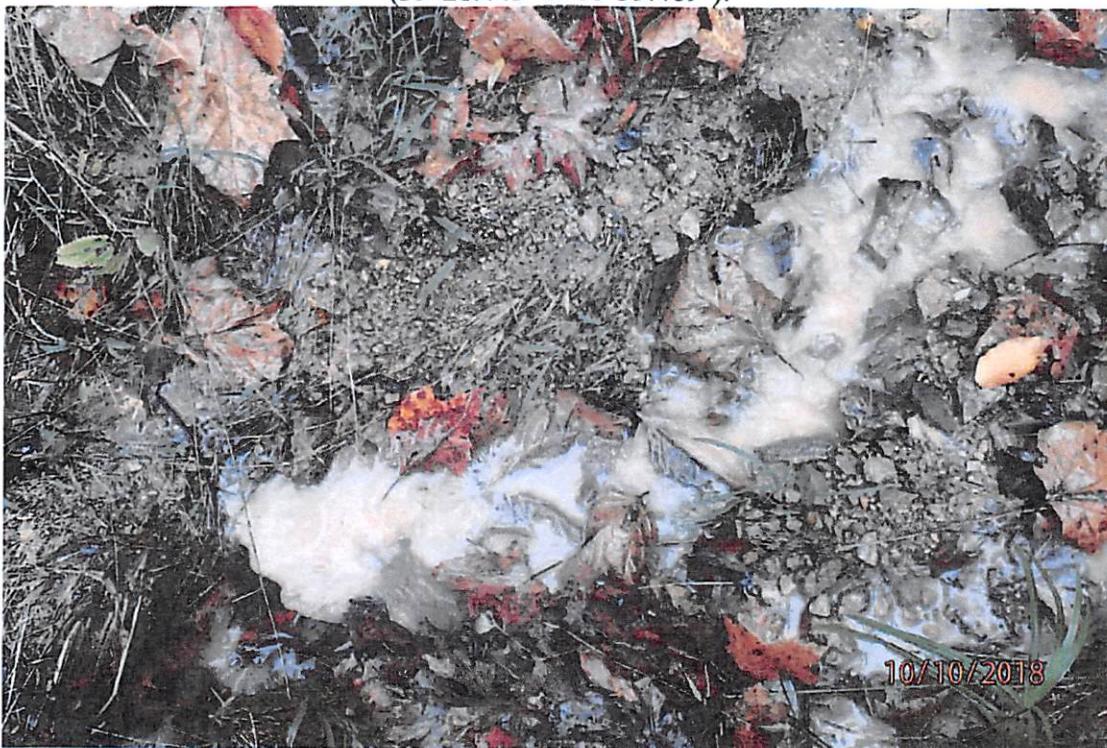


Offsite CNA distinctly visible settleable solids in UNT Beverlin Fork (UNT 21) ($39^{\circ}26.296'$ X $80^{\circ}36.165'$).

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Sediment laden water bypassing under installed water bar terminus BMP adjacent to UNT Riggins Run
($39^{\circ}21.443'$ X $80^{\circ}39.489'$).



Offsite CNA deposits and distinctly visible settleable solids in UNT Riggins Run ($39^{\circ}21.443'$ X
 $80^{\circ}39.489'$).

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Sediment laden water in diversion along AR 18 going offsite and into UNT Riggins Run ($39^{\circ}21.443'$ X $80^{\circ}39.489'$) contributing to CNA along with previously pictured water bar terminus BMP bypass.



Ephemeral UNT Riggins Run ($39^{\circ}21.443'$ X $80^{\circ}39.489'$) at its convergence with UNT Riggins Run showing distinctly visible plume.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 & 10/11/2018



Installed diversion berm that lacks adequate outlets and is causing offsite sediment deposits due to overwhelmed outlet BMPs near 56+00.



Installed diversion berm that lacks adequate outlets and is causing offsite sediment deposits due to overwhelmed outlet BMPs near 56+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Diversion berm outlet BMP that has been overwhelmed and is in need of maintenance with associated offsite sediment deposits near 56+00.



View of above pictured BMP from downslope showing its need for maintenance near 56+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 & 10/11/2018



Diversion berm outlet with installed silt fence near 69+00.



Diversion berm outlet at edge of LOD showing offsite sediment deposits due to poor maintenance and excessive flow being directed at the device near 69+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Diversion berm outlet BMP that has been overwhelmed and is in need of maintenance with associated offsite sediment deposits near 132+00.



Offsite deposits as a result of above pictured deficiency near 132+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Diversion berm outlet BMP that has been overwhelmed and is associated with offsite CNA deposits near
UNT Morgans Run (39°17.506' X 80°40.813').



Diversion berm outlet BMP that has been overwhelmed and is associated with offsite CNA deposits near
UNT Morgans Run (39°17.506' X 80°40.813').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Offsite CNA deposits in UNT Morgans Run ($39^{\circ}17.506'$ X $80^{\circ}40.813'$) as a result of the previously pictured deficiencies.



Offsite CNA deposits in UNT Morgans Run ($39^{\circ}17.506'$ X $80^{\circ}40.813'$) as a result of the previously pictured deficiencies.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Fill slope erosion at water bar outlet adjacent to 66+00.

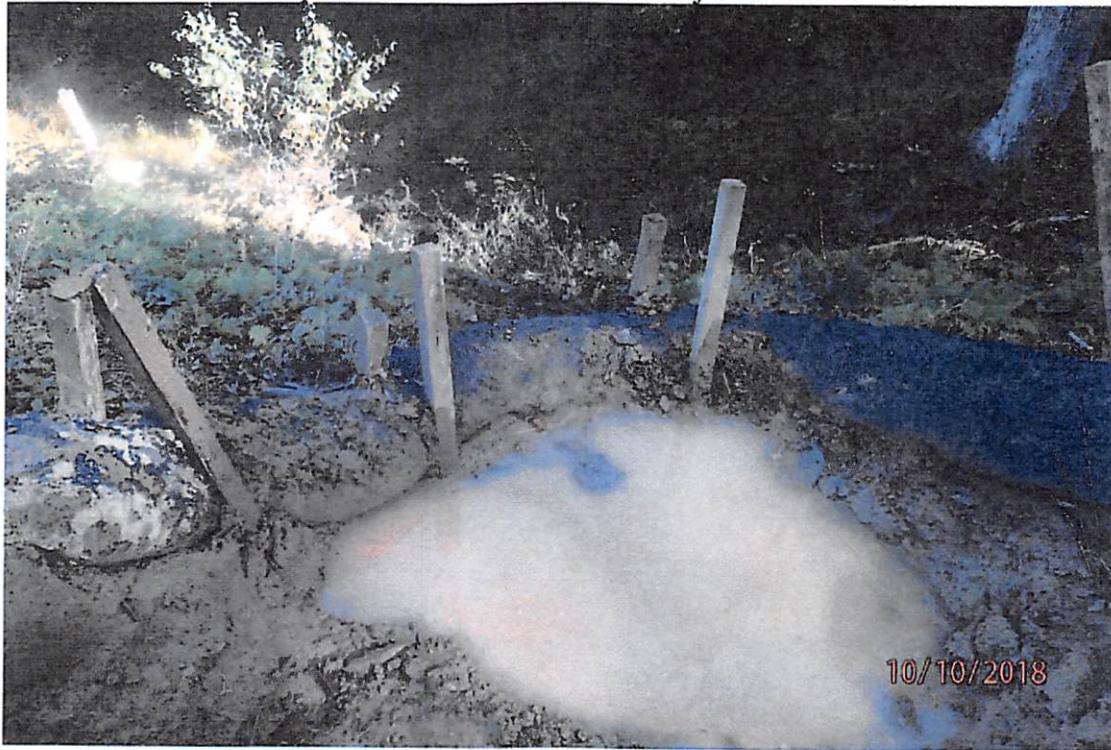


Fill slope erosion at water bar outlet adjacent to 105+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Fill slope erosion at water bar outlet adjacent to 144+00.



Installed water bar terminus BMP adjacent to 144+00 that caused offsite CNA deposits in UNT Morgans Run (39°18.509' X 80°40.356').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



CNA deposits in UNT Morgans Run (39°18.509' X 80°40.356').

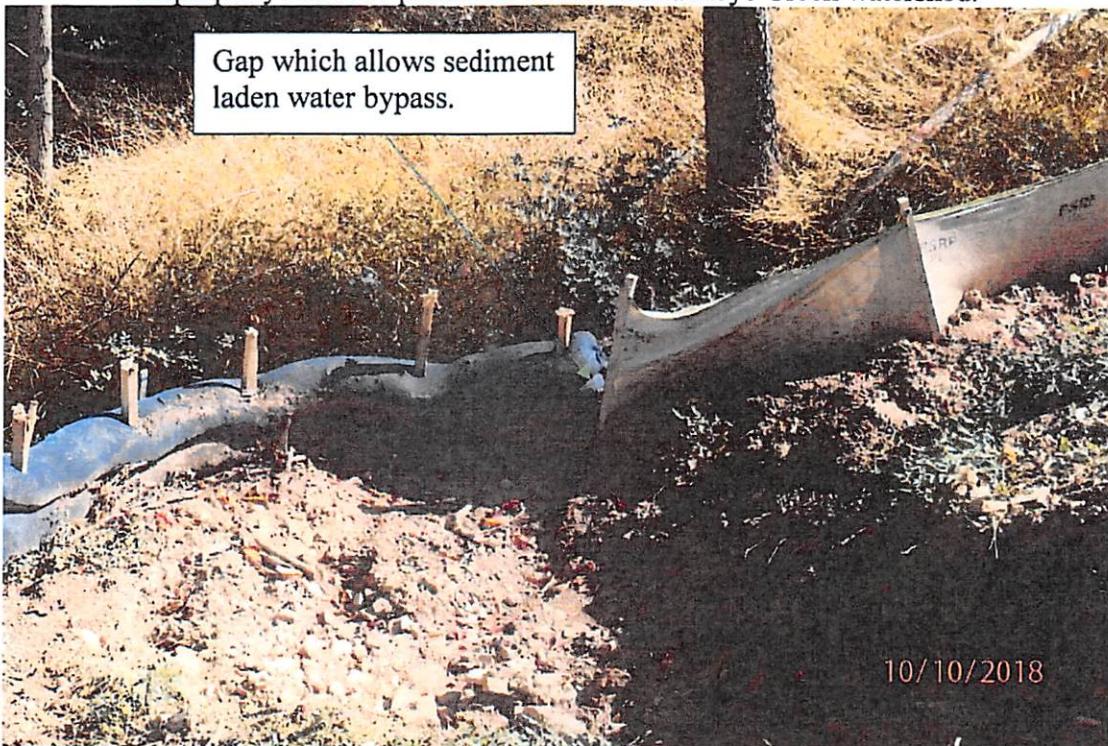


CNA deposits in UNT Morgans Run (39°18.509' X 80°40.356').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Improperly installed perimeter control in Buckeye Creek watershed.



Improperly installed water bar terminus BMP in Wolfepen Run watershed.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 & 10/11/2018



Improperly installed water bar terminus BMP which allowed offsite sediment deposits in Wolfpen Run watershed.



Offsite sediment deposits in Wolfpen Run watershed due to above pictured deficiency.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 & 10/11/2018



Overview of improperly installed water bar terminus BMP near 97+00.



Improperly installed water bar terminus BMP which allows sediment laden water to bypass under the BMP near 97+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Improperly installed water bar terminus BMP in the Riggins Run watershed that allows sediment laden water to bypass the device.



Improperly installed water bar terminus BMP in the Riggins Run watershed that allows sediment laden water to bypass the device.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Improperly installed water bar (steep angle) near 39+00.

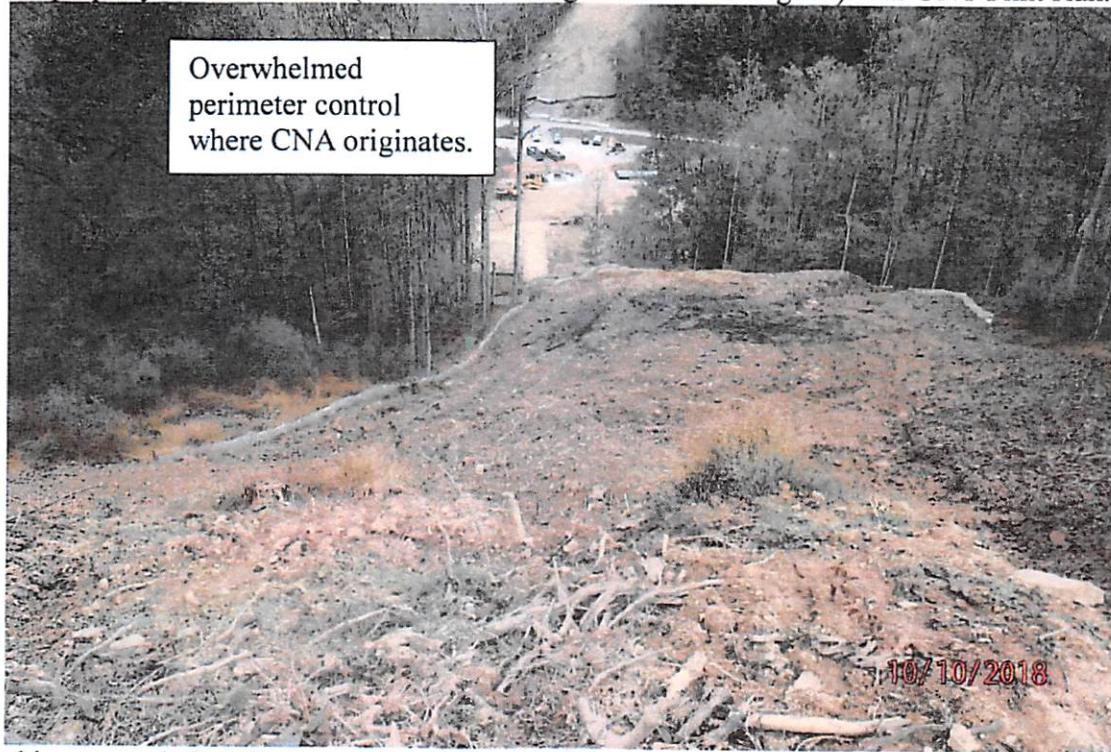


Improperly installed water (does not discharge off site as designed) near 551+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Improperly installed water (does not discharge off site as designed) near UNT Flint Run.



Area lacking properly installed water bars adjacent to UNT Flint Run. This caused excessive stormwater to overwhelm the installed BMP and caused CNA deposits in UNT Flint Run (39°20.058' X 80°39.931').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018

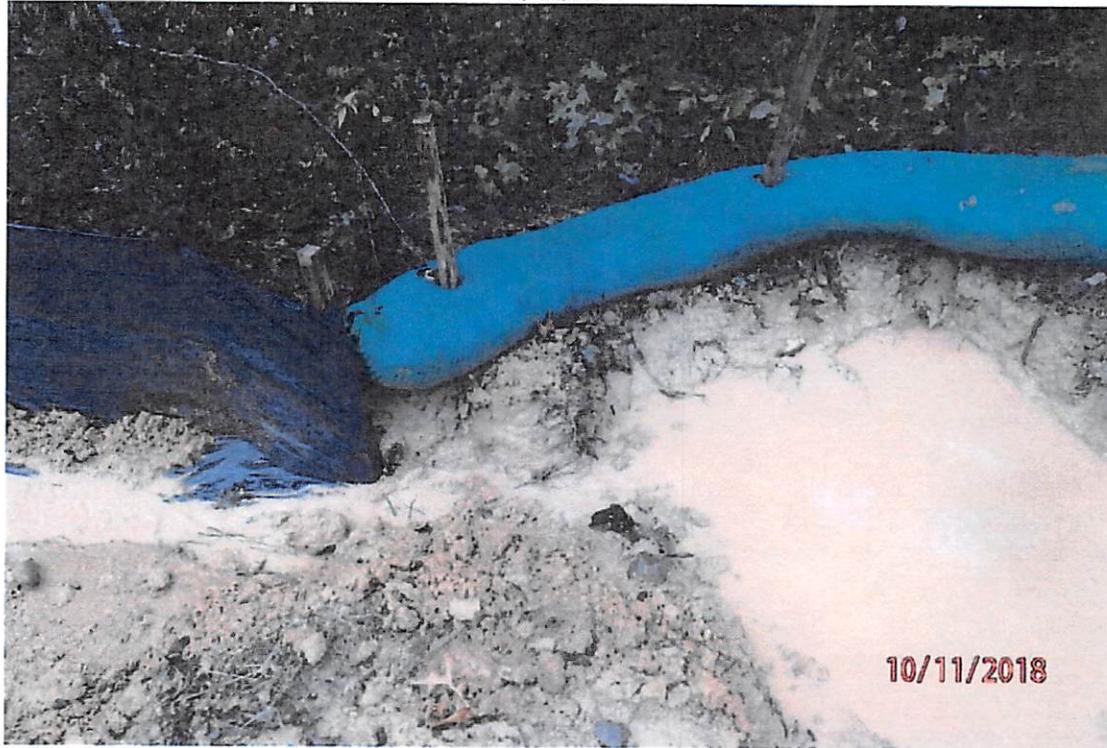


Previously overwhelmed BMP due to improperly installed water bars.



Offsite CNA deposits in UNT Flint Run (39°20.058' X 80°39.931').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Improperly installed water bar that does not shed stormwater offsite in small quantities as designed near 820+00.



Concentrated flow stormwater following perimeter controls as a result of poorly constructed water bars near 820+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Overwhelmed perimeter controls near 820+00 due to poorly installed water bars.



Sediment laden water bypassing perimeter controls adjacent to 820+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Improperly installed water bar terminus BMP adjacent to UNT Beverlin Fork (39°26.320' X 80°36.101')



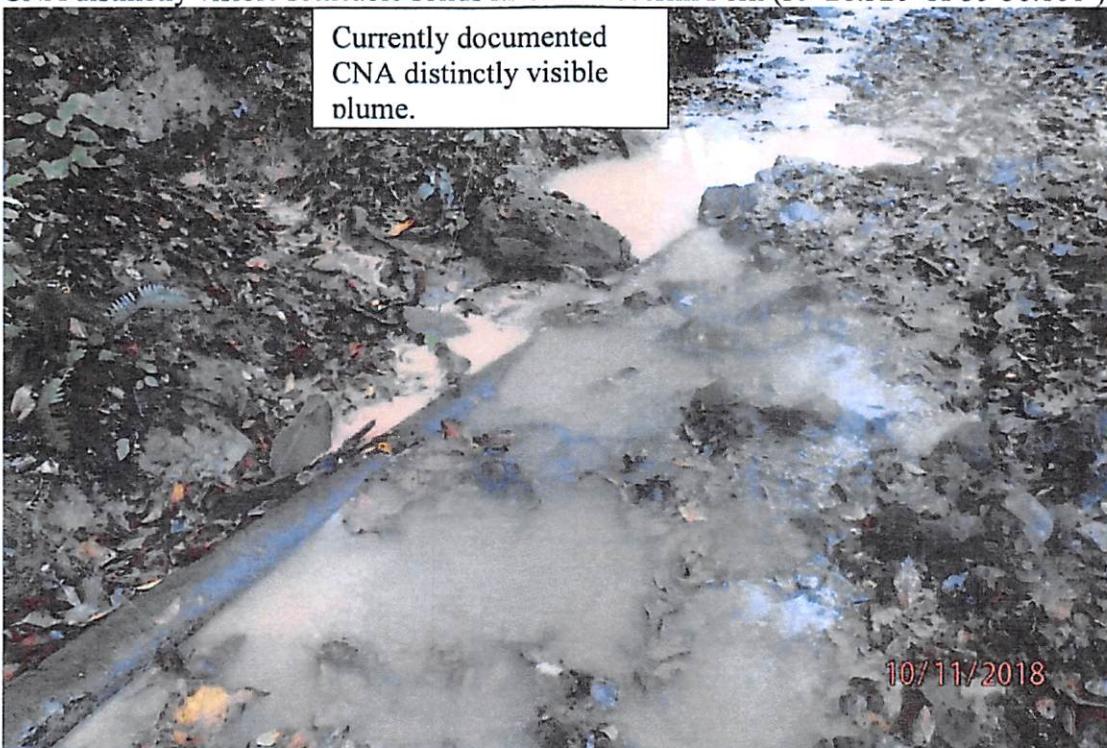
CNA distinctly visible settleable solids in UNT Beverlin Fork (39°26.320' X 80°36.101').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



CNA distinctly visible settleable solids in UNT Beverlin Fork (39°26.320' X 80°36.101').

Currently documented
CNA distinctly visible
plume.

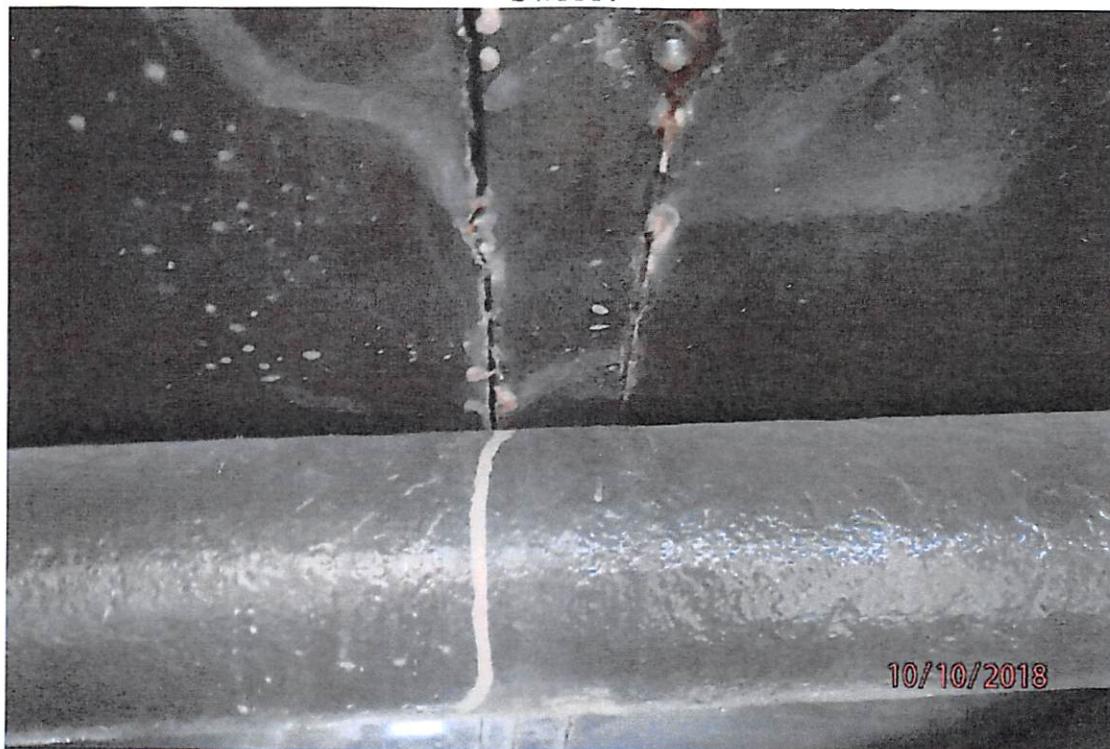


CNA distinctly visible settleable solids in UNT Beverlin Fork (39°26.320' X 80°36.101').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Installed bridge at crossing # 48 that lacks the top layer of timber mats as indicated in the approved SWPPP.



Evidence of sediment laden water bypass under the above pictured bridge (Crossing # 48).

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Installed bridge at crossing # 54 that lacks the top layer of timber mats as indicated in the approved SWPPP and is in need of maintenance. Bridge allowed sediment laden water to bypass the device and caused CNA distinctly visible settleable solids in McElroy Creek (39°23.952' X 80°38.768').



Above pictured bridge showing sediment laden water bypass.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



CNA distinctly visible settleable solids in McElroy Creek (39°23.952' X 80°38.768').



CNA distinctly visible settleable solids in McElroy Creek (39°23.952' X 80°38.768') as a result of the
bridge at crossing # 54.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Area adjacent to 142+00 where BMPs are not indicated in the approved SWPPP and the SWPPP needs to be modified in order to prevent sediment laden water from leaving the site.

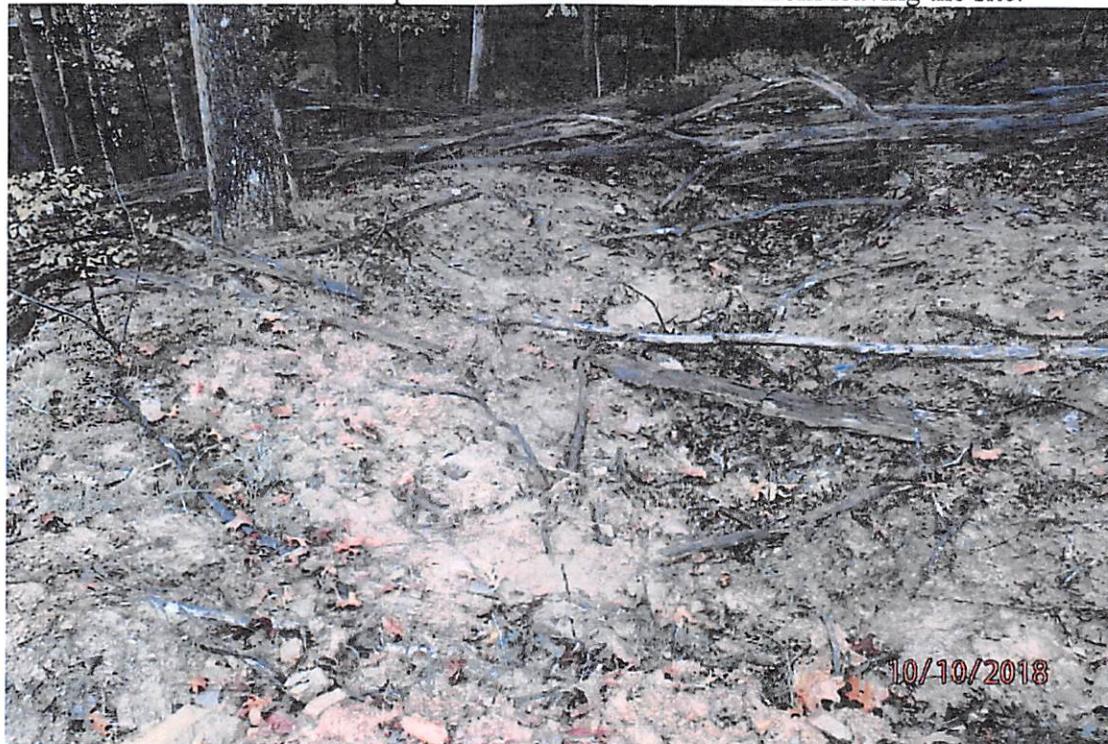


Area adjacent to 142+00 where BMPs are not indicated in the approved SWPPP and the SWPPP needs to be modified in order to prevent sediment laden water from leaving the site.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Area adjacent to 415+00 where BMPs are not indicated in the approved SWPPP and the SWPPP needs to be modified in order to prevent sediment laden water from leaving the site.



Offsite sediment deposits adjacent to 415+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Area adjacent to UNT Riggins Run where the approved SWPPP does not indicate the need for a BMP and sediment laden water is leaving the site with no device in place and causing CNA in the stream.



Area adjacent to UNT Riggins Run where the approved SWPPP does not indicate the need for a BMP and sediment laden water is leaving the site with no device in place and causing CNA in the stream.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



CNA distinctly visible settleable solids in UNT Riggins Run (UNT – 18) (39°22.075' X 80°39.463').



CNA distinctly visible settleable solids in UNT Riggins Run (UNT – 18) (39°22.075' X 80°39.463').

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Offsite slip near 248+00.



Offsite slip near 248+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Offsite slip near 479+50.



Offsite slip near 479+50.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Water bar that lacks water bar terminus BMPs indicated in the approved SWPPP near 510+00.



Water bar that lacks water bar terminus BMPs indicated in the approved SWPPP near 510+00.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Area of disturbance from 561+00 to 588+00 that lacks water bar terminus BMPs and perimeter controls indicated in the approved SWPPP.



Area of disturbance from 561+00 to 588+00 that lacks water bar terminus BMPs and perimeter controls indicated in the approved SWPPP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Area of disturbance from 561+00 to 588+00 that lacks water bar terminus BMPs and perimeter controls indicated in the approved SWPPP.

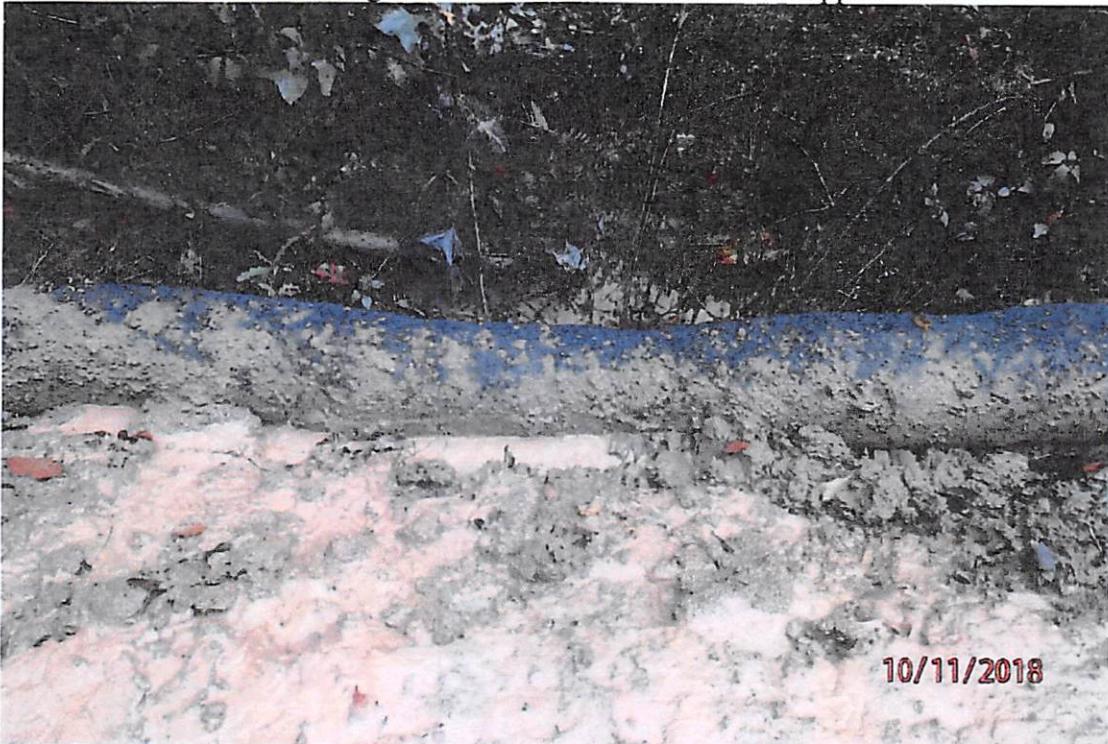


Area of disturbance from 561+00 to 588+00 that lacks water bar terminus BMPs and perimeter controls indicated in the approved SWPPP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Access road 42 showing a lack of stone as indicated in the approved SWPPP.



AR 42 showing sediment laden water bypassing under the installed perimeter control due to a failure to follow the SWPPP and place stone on the road.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Trash on the right of way.



Trash on the right of way.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



Stockpile that lacks temporary stabilization near 287+00.



Stockpile that lacks temporary stabilization near 350+80.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley 20" NGL, 10/10 &
10/11/2018



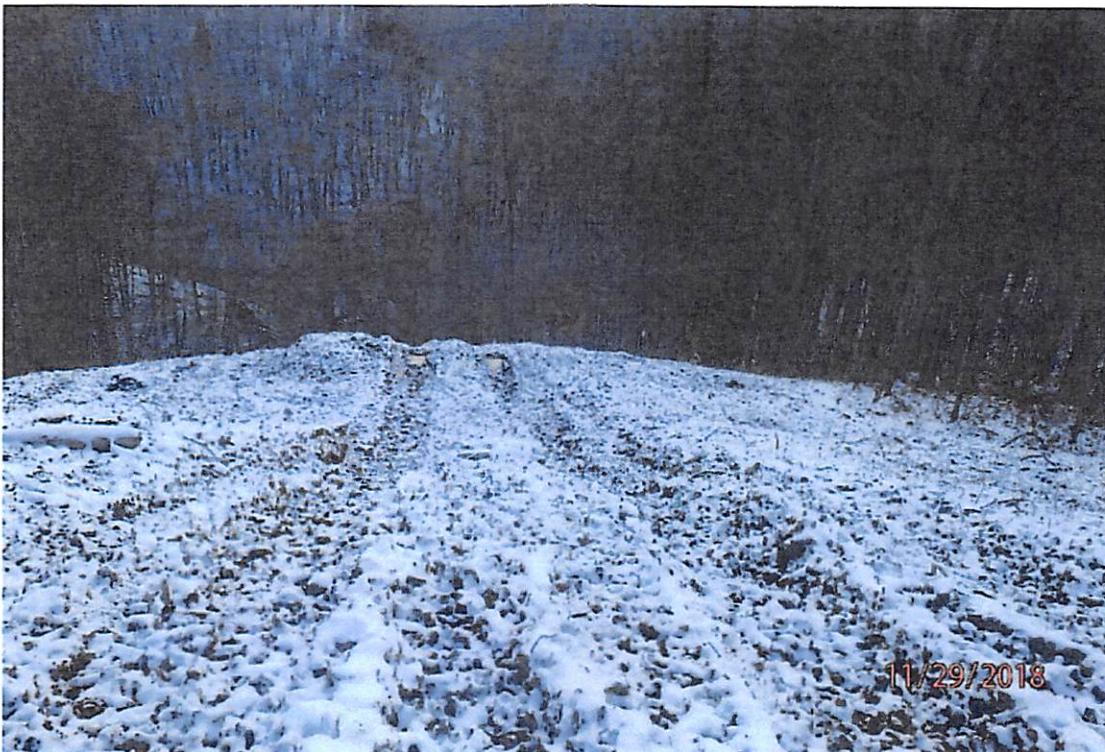
Right of way that lacks temporary stabilization near 862+00.



Inspected area from 661+00 to 669+00 showing the lack of water bars as indicated in the approved SWPPP.

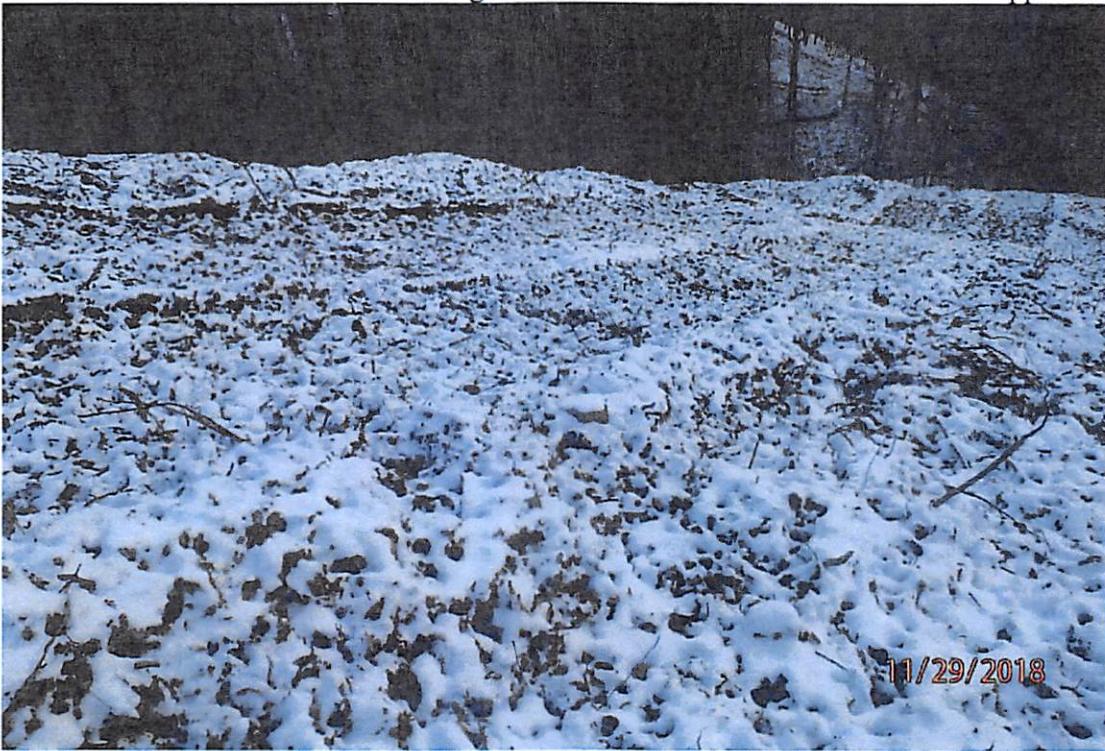


Inspected area from 661+00 to 669+00 showing the lack of water bars as indicated in the approved SWPPP.



11/29/2018

Inspected area from 675+00 to 682+00 showing the lack of water bars as indicated in the approved SWPPP.



11/29/2018

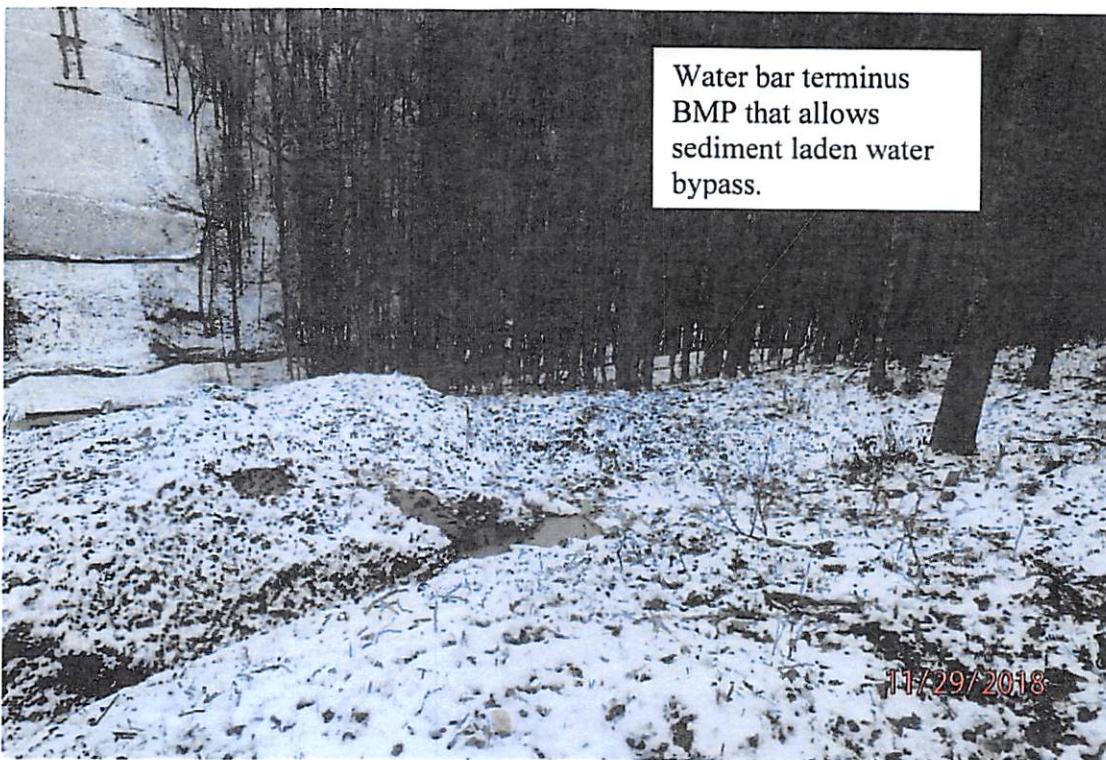
Inspected area from 675+00 to 682+00 showing the lack of water bars as indicated in the approved SWPPP.



Water bar outlet that does not extend past the installed perimeter controls in the Franks Run watershed.



Water bar outlet that does not extend past the installed perimeter controls in the Beverlin Fork watershed.



Water bar terminus BMP that allows sediment laden water bypass near 861+00.



Water bar terminus BMP that allows sediment laden water bypass near 861+00.



Offsite sediment laden water near 861+00 that originates from site due to a bypass at a water bar terminus BMP.



Offsite sediment laden water near 861+00 that originates from site due to a bypass at a water bar terminus BMP.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley
20" NGL, 02/27/2019



Overview of an installed pump set up near 374+00. The pump was not in use at the time of inspection.



Installed dewatering bag that contributed to the visible plume in UNT Boggs Run showing the lack of an installed geotextile lined flow path and the associated erosion downslope of the device.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley
20" NGL, 02/27/2019

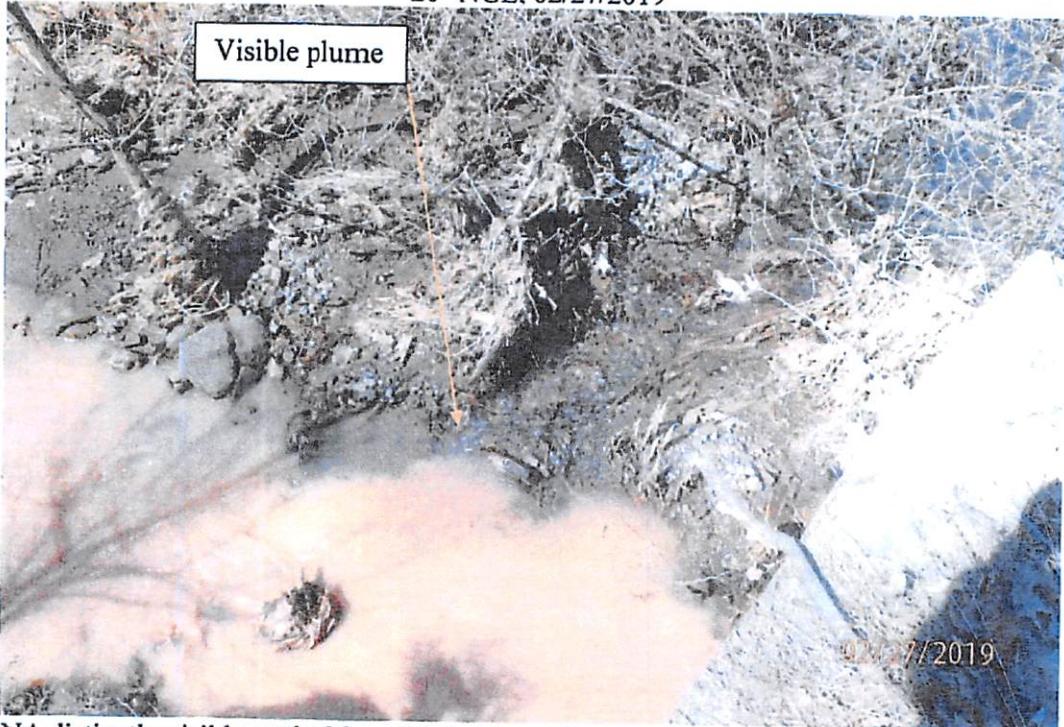


Erosion downslope of the previously pictured dewatering bag in the Boggs Run watershed showing the lack of an installed geotextile lined flow path and the associated erosion downslope of the device.



CNA distinctly visible settleable solids in Boggs Run as a result of the dewatering operation.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley
20" NGL, 02/27/2019

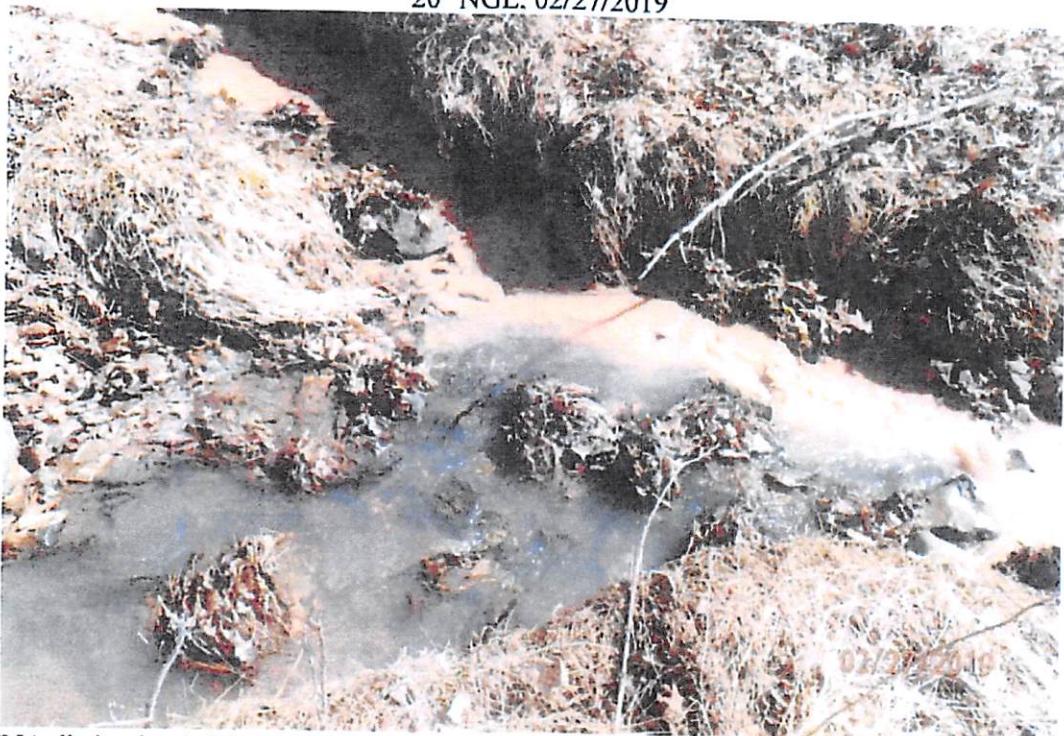


CNA distinctly visible settleable solids in Boggs Run as a result of the dewatering operation.



CNA distinctly visible settleable solids in Boggs Run as a result of the dewatering operation.

MARKWEST LIBERTY MIDSTREAM & RESOURCES, L.L.C., WVR311004, Sherwood to Mobley
20" NGL, 02/27/2019



CNA distinctly visible settleable solids in Boggs Run as a result of the dewatering operation.



CNA distinctly visible settleable solids in UNT Boggs Run (UNT – 95) ($39^{\circ} 21.161'$ X $80^{\circ} 39.549'$) as a result of the dewatering operation.

Base Penalty Calculation

(pursuant to 47CSR1-6.1)

Responsible Party: MarkWest Liberty Midstream & Resources, L.L.C. **Receiving Stream:** _____

Treatment System Design Maximum Flow: _____ MGD

Treatment System Actual Average Flow: _____ MGD (if known)

Enter FOF# and rate each finding as to Potential and Extent.

1)	Potential for Harm Factor	Factor Range	FOF#												
			2a	2b, 2f	2c	2d	2h	5a, 5c	5b	5d	5e	5f	5h	5i	7a
a)	Amount of Pollutant Released	1 to 3	1	1	1	1	1	1	1	1	1	1	1	1	1
b)	Toxicity of Pollutant	0 to 3	1	1	0	1	1	1	0	1	1	1	1	1	1
c)	Sensitivity of the Environment	0 to 3	1	1	0	1	1	1	0	1	1	1	1	1	1
d)	Length of Time	1 to 3	1	1	1	1	1	2	2	2	2	1	1	1	3
e)	Actual Exposure and Effects thereon	0 to 3	1	1	0	1	1	1	0	1	1	1	1	1	1
	Average Potential for Harm Factor		1	1	0.4	1	1	1.2	0.6	1.2	1.2	1	1	1	1.4
2)	Extent of Deviation Factor	Factor Range													
	Degree of Non-Compliance	1 to 3	3	3	3	3	3	3	3	3	3	3	3	3	3

Potential for Harm Factors:

- 1)c - Sensitivity of the Environment Potentially Affected (0 for "dead" stream)
- 1)d - Length of Time of Violation
- 1)e - Actual Human/Environmental Exposure and Resulting Effects thereon

Examples/Guidance:

Note: Rate as 1 for Minor, 2 for Moderate and 3 for Major. Rate as 0 if it does not apply.

Minor = exceedance of permit limit by <=40% for Avg. Monthly or <=100% for Daily Max., exceed numeric WQ standard by <= 100%, or report doesn't contain some minor information.

Moderate = exceedance of permit limit by >= 41% and <= 300% for Avg. Monthly , >= 101% and <= 600% for Daily Max., exceed numeric WQ standard by >= 101% and <= of 600% or report doesn't fully address intended subject matter.

Major = exceedance of permit limit by >= 301% for Avg. Monthly, >= 601% for Daily Max., exceed numeric WQ standard by >= 601%, failure to submit a report, failure to obtain a permit, failure to report a spill, etc. Note that a facility in SNC should be rated as major for length of time and degree of non-compliance.

Narrative WQ standard violations - case-by-case.

		Extent of Deviation from Requirement		
		Major	Moderate	Minor
Potential for Harm to Human Health or the Environment	Major	\$8,000 to \$10,000	\$6,000 to \$8,000	\$5,000 to \$6,000
	Moderate	\$4,000 to \$5,000	\$3,000 to \$4,000	\$2,000 to \$3,000
	Minor	\$1,500 to \$2,000	\$1,000 to \$1,500	Up to \$1,000

FOF #	Potential for Harm	Extent of Deviation	Penalty	Multiple Factor	Base Penalty
2a	Minor	Major	\$2,000	1	\$2,000
2b, 2f	Minor	Major	\$2,000	1	\$2,000
2c	Minor	Major	\$1,700	1	\$1,700
2d	Minor	Major	\$2,000	1	\$2,000
2h	Minor	Major	\$2,000	10	\$20,000
5a, 5c	Moderate	Major	\$4,200	1	\$4,200
5b	Minor	Major	\$1,800	1	\$1,800
5d	Moderate	Major	\$4,200	1	\$4,200
5e	Moderate	Major	\$4,200	1	\$4,200
5f	Minor	Major	\$2,000	1	\$2,000
5h	Minor	Major	\$2,000	7	\$14,000
5i	Minor	Major	\$2,000	12	\$24,000
7a	Moderate	Major	\$4,400	1	\$4,400
7b, 7c	Moderate	Major	\$4,400	1	\$4,400
9a	Moderate	Major	\$4,400	1	\$4,400
9b	Minor	Major	\$1,900	1	\$1,900
9d	Minor	Major	\$2,000	1	\$2,000
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
Total Base Penalty					\$99,200

Penalty Adjustment Factors

(pursuant to 47CSR1-6.2)

Penalty Adjustment Factor

6.2.b.1 - Degree of or absence of willfulness and/or negligence - 0% to 30% increase
 6.2.b.4 - Previous compliance/noncompliance history - 0% to 100% increase - based upon review of last three (3) years - Warning = maximum of 5% each, N.O.V. = maximum of 10% each, previous Order = maximum of 25% each - Consistent DMR violations for <1 year = 10% maximum, for >1 year but <2 years = 20% maximum, for >2 years but <3 years = 30% maximum, for >3 years = 40 % maximum

6.2.b.6 - Economic benefits derived by the responsible party (increase to be determined)

6.2.b.7 - Public Interest (increase to be determined)

6.2.b.8 - Loss of enjoyment of the environment (increase to be determined)

6.2.b.9 - Staff investigative costs (increase to be determined)

6.2.b.10 - Other factors

Size of Violator: 0 - 50% decrease

NOTE: This factor is not available to discharges that are causing a water quality violation. This factor does not apply to a commercial or industrial facility that employees or is part of a corporation that employs more than 100 individuals.

Avg. Daily WW Discharge Flow (gpd)	% Reduction Factor
< 5,000	50
5,000 to 9,999	40
10,000 to 19,999	30
20,000 to 29,999	20
30,000 to 39,999	10
40,000 to 99,999	5
> 100,000	0

Additional Other factors to be determined for increases or decreases on a case-by-case basis.

Public Notice Costs (cost for newspaper advertisement)

6.2.b.2 - Good Faith - 10% decrease to 10% increase

6.2.b.3 - Cooperation with the Secretary - 0% to 10% decrease

6.2.b.5 - Ability to pay a civil penalty - 0% to 100% decrease

Base Penalty Adjustments

(pursuant to 47CSR1-6.2)

Penalty Adjustment Factor	% Increase	% Decrease	Base Penalty Adjustments
6.2.b.1 - Willfulness and/or negligence -	10		\$9,920
6.2.b.4 - Compliance/noncompliance history	25		\$24,800
6.2.b.6 - Economic benefits - (flat monetary increase)			\$0
6.2.b.7 - Public Interest - (flat monetary increase)			\$0
6.2.b.8 - Loss of enjoyment - (flat monetary increase)			\$0
6.2.b.9 - Investigative costs - (flat monetary increase)			\$0
6.2.b.10 - Other factors (size of violator)			\$0
6.2.b.10 - Additional Other Factors - Increase (flat monetary increase)			\$0
6.2.b.10 - Additional Other Factors - Decrease (flat monetary decrease)			\$0
Public Notice Costs (flat monetary increase)	\$30		\$30
6.2.b.2 - Good Faith - Increase			\$0
6.2.b.2 - Good Faith - Decrease			\$0
6.2.b.3 - Cooperation with the Secretary		10	(\$9,920)
6.2.b.5 - Ability to Pay			\$0
Penalty Adjustments			\$24,830
Penalty =			\$124,030

Estimated Economic Benefit Item	Estimated Benefit (\$)
Monitoring & Reporting	
Installation & Maintenance of Pollution Control Equipment	
O&M expenses and cost of equipment/materials needed for compliance	
Permit Application or Modification	
Competitive Advantage	
Estimated Economic Benefit	\$0
Comments: Economic benefit not warranted.	